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TRENCH GASCOIGNE PRIZE ESSAY, 1943

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SUBJECT

"Is compulsory training in National Defence desirable for the youth of this country after the War? If so, in what form should it be given; can use be made of any existing youth organizations; how is it to be associated with education, and between what ages should it take place?"

BEFORE attempting to answer the principal question set forth in the subject of the essay, it is necessary to examine existing youth organizations in some detail to see how far they meet the needs of National Defence.

YOUTH ORGANIZATIONS

Some youth organizations are of long standing. Except in the case of the cadet forces, they have, however, lacked Government support and have been dependent for their survival on the enthusiasm of their promoters and on the contributions of the public. But, in 1939, the Government decided that the development—mental, social and physical—of youths from 14 to 18, who had ceased full-time education, had been too long neglected. They therefore decided that the Board of Education should undertake direct responsibility for youth welfare as a recognized province of education, among the aims envisaged being bodily development and the formation of character.

A National Youth Committee¹ representing local education authorities, youth organizations, industry, health and physical training was therefore appointed to provide central guidance and to advise the Board regarding grants towards the provision of leaders, accommodation and equipment. It acted further as a general clearing-house in all the affairs of youth. These arrangements should increase the strength of the youth organizations and should render them in the future more valuable to National Defence than in the past.

While a special branch of the Board of Education fosters youth organizations as a whole in the fashion noted, branches of the Admiralty, the War Office and the

¹ Now the Youth Advisory Committee.

Air Ministry finance and control the activities of the cadets of the three fighting Services.

The various juvenile associations, both cadets and non-cadets, in being at the moment have for the most part one or more of the following objects in view:— (1) social amenities; (2) physical, mental and moral culture; (3) reduction of juvenile delinquency; (4) service to the community; (5) National Defence.

All have their value. Those devoted mainly to social amenities offer much-needed rest and recreation to youths engaged for long hours in hard and monotonous work in the industrial world. They include the National Association of Boys' Clubs and, for the period of the War, have virtually opened their doors to all comers.

Apart from Cadet Corps, the organizations primarily devoted to moral and physical culture, and therefore of direct importance to National Defence, are the Boy Scouts, the Boys' Brigade and the County Badge Association.

THE BOY SCOUTS

The Boy Scouts have a world-wide reputation and since their formation in 1908, have been copied, at least in some degree, by virtually all nations. The pre-War membership in Great Britain numbered nearly 400,000, of whom, however, not more than 80,000 were of the ages 14-17, with which this essay is chiefly concerned.

The boys are divided into three classes: Wolf Cubs, 8-11; Boy Scouts, 11-17; and Rover Scouts, over 17. Among them are some 7,000 Sea Scouts and a few Air Scouts. Since the outbreak of war, a corps named "War Service Scouts" composed of boys of 15 and upwards, has been instituted. It is based on a system of small patrols, which are expected to take on "any job of National Service which may come along."

The Scout Law demands of the boy a high sense of honour, loyalty, courtesy and obedience to parents and leaders. It is intended through the training which it provides, which is conducted mainly in camps and in expeditions across country, to build his character and make him self-reliant and resourceful.

Excellent as is the system, there are, however, certain flaws in it from the point of view of National Defence. The policy laid down is to have "no connection in any way with the armed forces of the country"²; and this rule was often, during the period between the two world wars, interpreted to require an attachment to pacifism and appeasement. Though obedience forms part of the Law, the founder of the movement disliked drill and discipline except in the mildest of forms and doses. "Our aim," he said, "is to make young backwoodsmen, not imitation soldiers."³ He laid too much stress on individuality and too little on combined work, the former quality being developed to excess by a plethora of badges.

Finally, what every writer, however strong an advocate of the Boy Scouts, deplores in the movement is the scarcity of leaders. This gap is inherent in the system, being due to the lack of a sufficient degree of discipline and of the team spirit.

It will thus be seen that the Boy Scouts as a body, though informed with a noble spirit and possessed of a high degree of efficiency in many of their activities, make no pretence at preparing our youth to defend the country.

² *The Boy Scouts' Association Policy, Organization and Rules*, Sec. 28.

³ *Scouting for Boys*. Baden-Powell, p. 319. Quoted by A. E. Morgan in the *Young Citizen*, p. 113.

THE BOYS' BRIGADE AND THE CHURCH LADS' BRIGADE

The Boys' Brigade, which is a strongly religious Protestant body, has proved of greater value. It lays considerable stress on discipline and less on spectacular forms. "It undertakes," said the Archbishop of Canterbury in a recent address, "to promote and safeguard the military virtues for civilian life." In its curriculum it includes many military subjects such as drill, signalling and physical training. It recruits leaders largely from its own ranks, selected boys, if they wish to become officers, being allowed to continue serving for that purpose after reaching the age of 17. At the outbreak of war, out of a total of 165,000 members, 68,000 were of the ages 14 to 17, a much higher proportion than that found in the Boy Scouts. There was, however, among them also a pacifist tendency; and rifles, even dummy rifles, have long been banned from their exercises.

The Church Lads' Brigade is similar in many respects to the Boys' Brigade. It is a small body, containing in 1939 some 7,000 members of the ages 14 to 17.

THE COUNTY BADGE SCHEME

The County Badge Scheme may now be described. It is not a youth organization in the usual acceptance of that term, but rather an association formed for developing and applying a system of training for boys of 12 to 18. It is designed not alone to build up physique but also, through overcoming the obstacles to achievement in four separate fields of action, to form character, discipline self and steel the will. Badges are awarded in each age-group for the attainment of certain standards—a Standard Badge for normal and a Silver Badge for outstanding achievements.

The training cultivates running, jumping, throwing, swimming and boxing and gives purpose to those exercises, otherwise limited in value, by using them as stepping-stones to adventurous expeditions in the mountains or on the sea. In these, accomplishment is placed first; and though, in order to fulfil the task, every care is enjoined, safety is rightly relegated to second place.

The system embodies other valuable features and is a first-class introduction to the battle of life. Its main faults are—first that, though sound enough in its encouragement, development and reward of the individual, it aims insufficiently at co-operative victories; secondly that, for all its fine athletic culture, it fails to stress the need of patriotism and preparation for the defence of the country. It even expresses a fear of its training "being perverted to nationalistic purposes";⁴ though, possibly, such anxiety arose from the fact that its founder—Kurt Hahn—fled from Germany to escape from the National-Socialist domination of education. It has a splendid off-shoot in the "Outward Bound Sea School," established at Aberdovey, which is mainly attended by Sea Cadets and others whose careers may be upon the waters.

THE SERVICE CADET FORCES⁵

Finally among the youth organizations we come to the cadet corps appertaining to the three fighting Services. Of these, the oldest are the Army Cadets. In early days they used to be attached by companies to Volunteer battalions. Then, with the advent of Lord Haldane's reforms in 1907, they were divided into two bodies—the Officers' Training Corps (O.T.C.) and the Cadet Force.

⁴ *The County Badge, or the Fourfold Achievement*, p. 22.

⁵ See also articles on "The Army Cadet Force" in the *Journal* of August, 1942, p. 253; and "The Sea Cadet Corps" in the November number of the same year, p. 337.—EDITOR.

The O.T.C. was designed primarily to furnish a partially trained reserve of officers for the Army. It was restricted to members of the Public Schools¹ and the Universities and received considerable assistance from the War Office in training and finance. It was a fine corps, and it fulfilled its purpose in the first global war as well as could be expected from its numbers and the limited time devoted to training. In the present war, owing to the introduction of conscription and the decision to pass all aspirants to Commissions through the ranks, it ceased to function in the sense of its original purpose. School O.T.C. and University O.T.C. have now been re-named Junior Training Corps (J.T.C.) and Senior Training Corps (S.T.C.) respectively.

The Cadet Force was, under the Haldane reforms, affiliated by units to corresponding units of the Territorial Force. It was, however, scurvily treated. Allowances were of a meagre nature, and for some years both recognition and grants were withdrawn by the Government. It would indeed never have survived but for the enthusiasm of its members and the consequent formation of the British National Cadet Association in its support.

The Sea Cadet Corps had some nebulous beginnings dating back to the Crimea. Towards the end of the XIXth Century, its various component brigades were gradually affiliated to the Navy League and administered by that body. Admiralty recognition was accorded in 1919; and, in 1941, there were about one hundred units of the corps in the United Kingdom.

In 1938, the Air Defence Cadet Corps was founded by the Air League and, at the outbreak of war, was about 10,000 strong. Re-named the Air Training Corps, it was taken over by the Air Ministry in 1940, generously financed and provided with uniforms and many adjuncts to flight-training. The note was struck at the right time. It was the glorious hour of the Battle over Britain and, in consequence, figures soared rapidly almost to the allotted ceiling of 200,000. At first boys from 16 to 18 were enrolled. The lower age limit has now been reduced to 15½ years. The value of the corps may be gauged from a recent speech by Mr. Bevin. "Nowhere," he said, "has the loss which the nation was sustaining by lack of universal training been more evident than in the revelations that have come to us in the Cadet Corps of the A.T.C."

In December, 1941, by which time the A.T.C. was firmly established, the Government turned their attention to naval and military cadets, to whom they now accorded much more favourable treatment than heretofore. In the Army Cadet Force (A.C.F.), while the existing age limits of 12 to 18 were retained, boys between their 14th and 17th birthdays were furnished with uniforms and given increased annual grants that have now risen to 15s. a head. The Territorial Army having been scattered far and wide by the exigencies of war, units of the A.C.F. were also affiliated to neighbouring units of the Home Guard and received from them much assistance in instruction and equipment of which the Force, in view of the world-wide calls on our man-power and productive capacity, was at the outset naturally deficient. The fact that the same Directorate at the War Office controlled both bodies ensured reality to the affiliation. The direct responsibility for the training of the A.C.F. was delegated by the War Office through the usual channels to the local Regular brigade or sub-district commanders. This tremendous improvement in conditions—military, financial and social—produced immediate results.

¹ In recent years a number of secondary schools with good cadet corps were authorized to form O.T.Cs.

In 1918, the Army Cadet Force had reached six figures. In 1941, despite the great war that was raging, it was down to 20,000 and seemed to be bogged there. Yet, by the end of 1942, it was up to 180,000. About the same time, the Sea Cadets, under equally favourable conditions and the urge of a fine enthusiasm, reached their ceiling of 50,000.

Previously, the cadet forces, almost alone in this respect among youth organizations, had proved fully equal to producing their own leaders; but their sudden and tremendous expansion created great difficulties in this respect. Only elderly men, men physically unfit and men in reserved occupations were available. Nevertheless, through concentrating on the training of officers at courses, thereafter through the training of N.C.Os. by officers and through the keenness of all concerned, much progress has been registered. Moreover, the Home Guard has seconded a number of its officers and other ranks for commissioned service in the A.C.F. Thus the great obstacle is being slowly surmounted and, once overcome, it should never recur in serious form.

The movement at the outset of its expansion obtained a tremendous fillip from the encouragement afforded by the Board of Education to schools and youth organizations to join the cadet forces together with their masters and leaders and to place their accommodation and amenities at the disposal of such cadet units as they had joined. In this way organization was facilitated and cadet life rendered more attractive by the addition of a social background.

A word now on the objects of the cadet corps. They are two in number. The first—the fundamental *raison d'être* of the Corps—is National Defence. It is expressed during the War in special concentration on pre-entry training. The second, common to the bulk of the youth movements, is to afford boys moral, mental and physical training in order to render them fit in body and mind and to instil in them the basic virtues of religion, patriotism, loyalty and good citizenship; to prepare them in short for the battle of life and for selfless service to the community.

From this brief survey of the strengths, purposes and activities of the various juvenile associations it can be seen that, prior to the present war, they were few in numbers and that only an insignificant—almost negligible—proportion of them made any direct preparation for the defence of the country even during the first disastrous period of the War, and that of the remainder by no means all devoted themselves to physical and moral culture which by its toughening and inspiring effects would have laid for them a valuable foundation for soldiering.

GERMAN YOUTH ORGANIZATIONS

We may at this stage take a brief look at German methods in the physical development of youth. In 1936, the Board of Education despatched a delegation abroad to study them. It came back much impressed. It noted in particular the very careful training of instructors. It noted also that all members of the *Hitler Jugend*, which then numbered six million, have to pass physical efficiency tests² of many kinds. In its report, it stated that facilities for training were more varied and numerous and the work more effectively organized and co-ordinated than in Britain.

In the military field, the German youth concentrated on drill and manoeuvres. The drill of their labour corps during the annual display at Nuremberg was

² Now included in the syllabus of Certificate "A" for cadets.

impeccable. Armed with polished spades, they performed exercises with all the perfect precision of our Grenadier Guards. In mimic warfare the two opposing bodies might start 40 miles apart. They would carry no weapons, but otherwise act as if at war. They would march night and day, bivouac, swim or bridge rivers, lay ambushes, execute reconnaissances and stage assaults. Each boy wore an armband of the colour assigned to his side and easily torn from him; and the force that collected the greater number of armbands was declared the winner. It was undoubtedly a great boys' game and thoroughly enjoyed by the participants.

In the matter of sports and games the Germans had made a close study of British methods, which they greatly admired, and had borrowed and improved on what they thought to be the more virile and inspiring of them. Boxing and athletics, for instance, were encouraged, while golf and tennis were at a discount.

While there is something to be learnt from the German system, there are also strong objections to it. It is essentially political, Hitler and his creed being drilled into the boys from morning to night. The boys are regimented in every sphere and taught to be aggressive and militarist. Intellectual standards have been shamefully lowered. Service to Hitler, service to the Nazi party have taken the place of service to God, to the country, to the community and of respect for parents.

NATIONAL DEFENCE

Having made a short study of British and German youth organizations we are now in a position to deal directly with the subject of this essay. The first question raised therein asks: "Is compulsory training in National Defence desirable for the youth of the country after the War?" This matter is of course vital to the whole discussion and therefore the cases for and against compulsion must be treated as exhaustively as space will allow.

It is first of all necessary, however, to clear our minds as to the meaning of National Defence. This term has usually been employed with reference to the three fighting Services only. With our experience of total war, we need now to broaden that narrow meaning so as to include as well all services whose assistance is invoked for our protection—civil defence (including fire service), health, Red Cross, police. As, however, no cadets have yet been enrolled for these civil services, the words "cadet forces" as used in this essay will refer, unless otherwise stated, to cadets under training for the fighting forces. We may now turn to the main issue.

THE CASE AGAINST COMPULSION

(a) Britain has long regarded compulsion askance in any form. She can say with pride that she has been the *fons et origo* and the home of voluntary effort in many fields such, for instance, as health and justice. All our juvenile associations are of a voluntary nature and they have undoubtedly exercised a measure of beneficent influence in guiding and stimulating our youth.

(b) There is a high mental and moral inspiration in the exercise of free-will in the pursuit of any form of work or danger. In the case of both leaders and boys, compulsion would certainly militate against enthusiasm. This is a very real objection. Moreover, by cramping self-expression it might blight the priceless gift of initiative in the bud.

(c) The incidence of compulsion is in some respects irregular. It is both more readily applicable and less galling to schoolboys than to boys in employment, some of whom are already overworked in industry and agriculture, and others

suffering from malnutrition. On the other hand compulsion also tends to equalize burdens. To keen and patriotic boys who have joined the cadet forces it must seem unfair, however beneficial their training may be, that they should give a large part of their leisure hours to it while others, more selfishly minded, spend those hours in the cinema, at street corners or in watching football.

(d) Finally, we come to the question of incentives. It may certainly be argued that the catastrophic fall in the strength of the voluntary cadet forces between the two wars need not be repeated. For, now that we realize the danger, special incentives to enrolment will almost certainly be offered which either did not exist or did so only to a minor extent in earlier days. Here are a few likely to be employed :—

(i) Varied, purposeful and adventurous training of a type to capture the imagination as well as heighten morale and strengthen physique.

(ii) Inculcation to a high degree of *esprit de corps*, smartness and discipline.

(iii) Inculcation of patriotism, loyalty and a pride in national achievements.

(iv) Special attention, particularly in open units, to welfare, including the provision on a generous scale, as part of the plans for reconstructions, of premises suitable both for training and club life.

(v) Statutory fully-paid holiday of ten days for camp in the case of open units.

(vi) An honourable part in civic ceremonies.

(vii) Concessions for travel, cinemas and theatres.

(viii) Encouragement to place cadet competitions between schools on a higher level than football matches.

(ix) Prospects of reward for good service through reduction of the conscript period, should conscription be continued, or through marks towards obtaining a permanent Commission, or through quick transfer to an O.C.T.U.

These incentives would certainly have the effect of producing much larger forces than did the voluntary effort without their aid between the two Great Wars. But what would be the increase on the miserable results then achieved is impossible to estimate. It might not amount to 100 per cent., or it might reach 1,000 per cent. So plans would have to be based on guesswork. The latter figure should be the minimum target.

Incentives, however, so far as concerns the present argument, cut both ways. While obviously offering strong inducements to a boy hesitating to volunteer, they would also, if applied to a compulsorily enrolled cadet force, go far to compensate for the lack of enthusiasm which might otherwise prove its greatest drawback. Thus, whether employed with a volunteer or a conscript force, their effects, though not subject to accurate measurement, would probably be approximately equal in value. On the one hand they would increase numbers; on the other they might create enthusiasm.

THE CASE FOR COMPULSION

(a) Compulsion, however much the word is disliked, is already exercised to the general benefit in such fields as taxation, traffic and education. It is in the last of these that this essay is specially interested. Youths are compelled to go to school up to the age of 14. Compulsory education, when first introduced, was indeed heartily detested by both parents and children. Yet within a year school attendance had become a habit; and now not a schoolmaster, not a parent would wish to see

the law abrogated. Nevertheless, when any suggestion of compulsory training arises, it is strongly opposed in some quarters on the grounds that to copy the methods of the *Hitler Jugend* would, it is averred, lead to an imitation of the aims of that body. That view is not easy to treat seriously. It implies an entire lack of faith in the strength of our ideals and in the anchoring power of our traditions. We have already copied Germany in applying conscription and in many another matter, but no one has yet suggested that we should in consequence follow her in wanton assaults on neighbours with whom we have just sworn friendship or in the brutal treatment of conquered peoples. Nor, on the other hand, does the German seem to be adopting our aims though he has borrowed many of our methods. The very fact that our greater juvenile associations exclude politics wholly from the range of their activities, whereas the *Hitler Jugend* is an essentially political body fanatically Nazi in outlook and purpose, should alone prevent any bridging of the gulf between British and German youth until the Hitlerian *Weltanschauung* shall have been finally eradicated.

(b) Voluntary training reaches only those who wish to render themselves fit for service. It is not easy to discover what proportion of the young people of the country had been enrolled in youth organizations prior to the War, but it certainly did not exceed 40 per cent., even if the numerous associations lacking any military value be included; and it is doubtful if it exceeded 25 per cent. It is the remaining 60 to 75 per cent. who would profit most by training during the period of growth—that is, the lazy and the unwilling, together with those now overworked or undernourished who, under a more enlightened and humane social system, would be rendered available for training. There is much good stuff in them as in all our youth; but in present conditions it cannot be developed or utilized even for their own benefit until they enter the fighting forces.

(c) The juvenile associations, as they existed in 1914 and 1939, had, apart from the cadets, in no way prepared themselves to ward off the serious menaces with which the Empire was confronted in those years; and it is by no means certain that they will do so of their own free will in the future. Their failure was indeed less their fault than their misfortune. The pacifist and the intellectual, usually combined in the same person, dominated the periods immediately antecedent to the two world wars. Their brilliant and insidious dialectics vitiated the minds of our young people to the discount of such basic virtues as patriotism, loyalty and duty. As a result, in both cases youth made a wholly insignificant contribution to preparation for defence. It is not possible indeed to eliminate cranks from our society, but were training of the nature now afforded the cadets rendered universal, it would offer a strong counter to their more harmful activities. In computing their powers for evil, and in combating them in the future, we should bear in mind that, though seemingly now on the high road to victory, we were partly on their account in danger over a considerable period of complete and final defeat, to the extinction not only of our own people, but also of all good and great purposes for which the Empire stands.

(d) Compulsion would enable the authorities to know exactly how they stand with regard to meeting the requirements of the various corps and to adjust their enrolments and apportionments accordingly. It would facilitate the connection between the cadet corps and the conscript forces. It is regular, continuous, all-pervading and, equitably applied, it should become as acceptable in the sphere of cadet training as is traffic control in that of the motorist. The voluntary effort,

on the other hand, affords no solid basis for planning, is irregular, intermittent and dependent on emotional calls such as an outbreak of war.

It might be objected, indeed, that compulsion would produce over a million cadets—a figure seemingly far in excess of our peace requirements. Actually, however, we can hardly have too many of them. For, in the first place, it is during peace that we need our cadet forces most; because that, rather than the war period, is the season for preparation and the season also for showing a strong military front to deter gangster nations from thoughts of aggression. In the second place, we have to consider not alone the needs of our fighting forces but also those of civil defence, the medical service and police, candidates for which would be all the better for early training. Thirdly, cadet training greatly enhances our physical and moral powers in the domestic as well as the international field. No such training could ever be wasted.

(e) It is generally recognized that the paramount aim of education should be the formation of character. Not a speech, not a pamphlet, not a book on education or juvenile associations but stresses its importance. The Boys' Brigade aims at the formation of manly Christian character, the Boy Scouts at developing "good citizenship among boys by forming their characters."¹ The Scottish Education Department holds that: "The schools have no more vital duty than to mould the character of their pupils."² The most distinguished educationist in America lays down that "Education begins with discipline and leads to self-discipline. The building of character is its most important purpose."³ According to the Board of Education: "The over-riding purpose of all this (social and physical) training is the building of character."⁴ Similar quotations could be made almost *ad infinitum*.

Agreement on the principle is thus universal. In practice, however, the chief object of education appears to be the acquisition of facts for the passing of examinations and the winning of scholastic honours. Many headmasters recognize the existence of this fault, yet programmes of studies continue to be overloaded. It is highly improbable that we shall see any noteworthy change in this respect in the immediate future. For no satisfactory substitute for examinations has yet been invented; yet they are a test not for character but for knowledge.

The evil, however, can be remedied at least to some extent. The formation of character has been not alone a primary aim but also a constant practice of the three cadet corps. Discipline, self-discipline, self-confidence, leadership—all the qualities that develop and fortify character—are instilled in the cadet throughout his career as such. In pre-War days cadets were few and therefore only a small percentage of our youths enjoyed this advantage. Now nearly half a million boys profit by it. Post-War, were compulsion introduced, double that number would do so.

It is not pretended that the cadet forces are the only character-forming agencies. There are others of value—the home, the Churches, the youth organizations, the admirable prefect system, sport, games. But they vary greatly in competence, determination and persistence. Alone in the cadet corps is character-forming pursued rigorously, unceasingly and successfully.

(f) Compulsion in this matter by a popularly elected Parliament is truly democratic in both principle and incidence. Under it, all recruits enter the fighting

¹ *The Boy Scout Association Policy, Organization and Rules*.—Rule 1.

² *Training for Citizenship*, p. 4.

³ Nicholas Murray Butler. *Report of the President of Columbia University*, p. 39.

⁴ *Circular 1516*.

Services on equal terms of experience and have therefore like prospects of advancement.

(g) Voluntary training, except in the cadet corps and in the Boys' Brigade, fails in any high measure to produce either leaders or discipline. The complaint of youth organizations has long been that they could expand greatly were it not for the lack of leaders; and the cry of the schoolmaster is that youth organizations provide social amenities and happy, healthy holidays, but are of no serious help to him, for they tend rather to loosen than to stiffen discipline. Compulsion in training of the kind obtained in cadet corps would give the schoolmaster his discipline and the other youth organizations all the leaders they need.

(h) A system of universal cadet training, even if not followed by service in a conscript army, might lay the foundation of a sane general outlook in the politico-military sphere, thus helping to ensure the maintenance of adequate defences and preventing the nation from embarking on rash and ill-considered adventures.

(i) Lord Dawson of Penn, who believes⁵ that no scheme of youth organization will be of any avail unless there is power of enforcing it, says that, after a few months, boys with good food, camp life, P.T. and games gain on an average one inch in height, two inches in chest measurement and one stone in weight. He adds that there is a close connection between body and mind and that there are favourable mutual reactions when both are soundly developed. All boys, he holds, should share such benefits, not merely an enthusiastic and privileged few.

(j) There is a distinct danger that, in the event of our final victory, now virtually assured, complacency regarding past performance will become prevalent. "What is the matter," it may be asked, "with a Youth that won the Battle of Britain, with a Youth that was ultimately victorious? Was not their success proof patent of the adequacy and excellence of the pre-War system of *laissez-faire*? Where is the need for compulsion?"

But the splendid young pilots to whom we owe so much formed a tiny, almost a microscopic, percentage of our Youth. Moreover, they were among the select few who, unlike the vast majority of their contemporaries, had prepared themselves for the fray and, consequently, when the trumpet sounded, went forth to battle disciplined, trained, skilled. Their devotion to duty in peace and war was rewarded, for it enabled them to beat the foe. But they achieved their triumphant immortality only by the narrowest of margins. Behind their weak and waning force there were practically no reserves at the moment when Hitler threw away the victory that lay within his grasp. Their knightly deeds should inspire future generations; but never again dare Britain rest her fate on so frail a foundation. Compulsory training, providing as it does a deep well of reserves from which to draw, should ensure against a repetition of this danger.

A COMMON JUNIOR CORPS

The question of the amalgamation of the three cadet forces into a single corps up to the age of, say, 15½ years, is under consideration by an official committee. It would seem desirable to discuss it in this paper and at this point because, in the event of its being carried out, it might well prove unpopular among the boys and, by thus reducing numbers, would furnish an additional argument for the introduction of compulsion.

⁵ Hansard. House of Lords Debate, 17th July, 1940, p. 1006.

The main points in its favour are :—

(i) It would be exceedingly difficult, if not wholly impossible, for a school to supply sufficient masters and other staff to run from two to four different corps—Sea Cadets, J.T.C., A.C.F. and A.T.C.—satisfactorily.

(ii) Certain branches of training are common to all Services: discipline, development of character and leadership, weapon-training, drill, arms-drill, aircraft-recognition, astronomy, the use of the compass, P.T. (including organized games), practice over assault courses, signalling, knotting and lashing, workshops and swimming. Even watercraft is no longer the sole appanage of the sailor, but is necessary in some degree both to the soldier and the airman. In addition, common to the A.C.F. and the A.T.C. is map-reading; and common to the A.T.C. and Sea Cadets is navigation. So much, indeed, is common that, with a little give and take and a refusal to be bound by absolute standards, a sound curriculum of basic training might well be elaborated.

(iii) The same syllabus, with the addition of First Aid, would afford suitable basic training also for candidates for civil defence, the medical branch and the police, should it be decided to combine cadets for these services with cadets for the fighting forces.

(iv) The separation of old from young has a value as regards the retention of cadets; for it is common knowledge among all youth organizations that the older boys do not like working with "kids" and are inclined to drop out for that reason.

(v) It would simplify for the authorities the task of drawing requirements as needed for the various Services.

There are, however, three objections to the institution of this corps. The first and the most important by far is that it would afford less attraction to enrolment and less incentive, less purpose, less reality to training. Many boys join because their fathers were in the Navy, the Army or the R.A.F. or because one of those Services offers a particular bait to them. If they could not at once become cadets of the Service of their choice, they might refuse to enrol at all. The officers, too, would much prefer to deal with a particular Service.

The second objection is that the Admiralty, it is understood, would like to take complete charge of their cadets at a much earlier age than that suggested as the top limit of age in the proposed corps.

The third objection is that fieldcraft, an important form of training for the A.C.F., is required for that force alone. On the other hand, it is popular with all boys and a knowledge of ground and skill in finding a way across country are useful in almost any kind of life, civil or military. Moreover, it affords opportunities of healthy exercise, cultivates habits of observation and develops leadership.

On the whole, though the first objection is a very strong one, the balance of argument comes down strongly in favour of a common junior corps; and its probable introduction is therefore a factor with which we must reckon in considering compulsion. Incidentally, in schools, as a matter of organization, it may be found preferable to make the division between junior and senior corps not by ages but by classes.

SUMMARY OF ARGUMENTS

We may now sum up the arguments for and against compulsion.

It is clear that, given sound direction, voluntary work, so far as it goes, has a more inspiring effect on the individual than has compulsion. It would be natural

therefore to discard any notion of employing the latter method if it were certain that the voluntary method could marshal the powers of our youths in preparation for National Defence and ensure their well-being.

But, actually, it has been shown that the juvenile associations touched until recently a mere fraction of our young people, and that they hardly came into the picture of National Defence at all during the periods immediately preceding the two world wars. During those wars, indeed, spurred by the prevailing patriotism and with considerable encouragement from the Government, the number of cadets rose rapidly. But numbers, unless they are trained numbers and available at the right moment, are of no serious value. When the enemy launches his attack, it may well prove too late to begin training. There is no more striking feature of modern war than the suddenness with which the aggressor launches his assault and the tremendous immediate gain that results from such action. It is therefore essential in our preparation for defence that we should be able to mobilize our powers at short notice ; and that end would be greatly advanced if all our fighting men should have received, and if all our young people were receiving, cadet training. Of what incalculable value would it have been both to the physique and morale of the nation and to our fighting forces had we realized that the time for preparation is before rather than during wars and had accordingly raised our cadet forces in 1918, or even ten years later, to their present figure of 430,000 and maintained them at that figure ever since. How firmly our statesmen could have spoken in the international sphere and how earnestly our alliance would have been sought by other nations in danger of attack ! With what surety and equanimity could we have laid our defensive plans to the discouragement and despair of the plotters of aggression !

The argument that control by the State tends to stifle self-expression is, of course, true up to a point ; but is a hardly ridden nag. A morning spent in a police court will show that self often expresses itself in ways that need stifling. In fact, unless self-expression were kept to a certain degree in check, society would relapse into chaos. Results of control depend on its nature and degree and also on the field in which it is exercised. The Fascist States in the political field undoubtedly exercise a control which according to our lights is grossly excessive. On the other hand, in the military field, the German, in spite of strict discipline and despotic rule, displays (though we seldom give him credit for doing so) quite as much individualism as any of his opponents, and expresses it in a trained and ready initiative.

Another point in this connection is that, in our considerable experience, we find there is nothing to choose as soldiers between volunteers and conscripts. Both, properly trained, fight famously.

A possible alternative to the compulsory enrolment of boys in one or other of the cadet forces would be compulsory enrolment either in a cadet force or in a recognized youth organization. There are two objections, together strong enough to be decisive, against such a policy : the first that it would produce for service in the cadet forces an unknown but far smaller number of potential warriors than would universal training ; and the second that youth organizations might be overwhelmed by the large numbers of undisciplined lads to whom the amenities of club life might offer a stronger attraction than strenuous military exercises.

A VOTE FOR COMPULSION

Such are the *pros* and *cons*. Though the issue is whether or not to apply compulsion, the decision, as befits a democracy, should be made by the people

through their representatives in Parliament ; and, as the case is of vast importance both to National Defence and to the future of our Youth, it should be judged without bias by a fully informed electorate. That is to say, the Government should, much as they have done in respect to the Education Bill, issue beforehand a White Paper detailing their plans for the cadet forces—plans which would differ but little, except as regards expectation of numbers, whether compulsion were to be applied or not. The matter should then be made the subject of the freest possible debate in the House—a debate that would prove more than usually valuable were members to treat it from the national standpoint and to renounce prejudice, whether of Party or person, in order to arrive at a sound and lasting judgment. The Government have indeed already declared their intention “to maintain the pre-Service cadet organization of the three Services on a voluntary basis after the conclusion of the war.”¹ But, before that policy is finally adopted, the country should be given an opportunity of expressing an opinion upon it. The writer’s vote—literally a drop in the electoral ocean—would be cast for compulsion ; for while he appreciates to the full the high spiritual values that derive from voluntary effort, he fears that they would benefit only a small proportion of our youth, and he believes that immense advantages would accrue both to the individual and the community were universal cadet training adopted. Moreover, compulsion would be in accord with the principle, fundamental to any true democratic system, of “equal opportunity for all.” The vote, when taken, might well decide whether our youth are to be “the pride or the problem of the nation.”²

THE FORM COMPULSION SHOULD TAKE

Now as to the form in which compulsion should be exercised.

The statutory periods of training should, apart from school P.T., consist of a minimum of two separate hours a week for thirty weeks in the year, plus ten days in camp. Compulsion should not be applied to officers as it is reasonably certain that, after our experience (including Home Guard experience) in the present war, there will be no dearth of patriotic, trained men of the right age and stamp ready to take Commissions in the cadet forces. They should, of course, be entitled to certain privileges, and care should be taken that they suffer no financial loss from their service.

In order that the full tale of officers may be available when required and to ensure that the movement does not sag because of a lack of them, the compulsion of youth should not be initiated until demobilization is well on the road to completion.

Enrolment should be subject to the passing of a satisfactory medical test. Total exemptions under this head should be few, however, so that as many boys as possible should be enabled to enjoy the physical value of cadet training. Weaklings should be given partial exemptions. They should carry out less arduous exercises than the others, but should step up as further inspections might show their condition to have improved.

VALUE OF YOUTH ORGANIZATIONS

Next, as to the existing youth organizations and the use that can be made of them. These bodies, especially the more virile among them, should be encouraged

¹ *Hansard*. House of Lords Debate, 9th November, 1943, p. 597.

² *Junior Colleges*, p. 20.

to the utmost, and they should as at present be given the widest possible freedom of development and action. Certainly, to them, compulsion should not be applied. They should, however, be persuaded to co-operate as closely as possible with the cadet forces. For the latter, as for themselves, they should provide, for the employment of leisure, a variety of activities including adventure, exploration, sailing, arts, drama, handicrafts And a boy's leisure in days of peace is no insignificant fragment of time. For in the ordinary week, after time for work (including cadet work), domestic tasks, sleep, meals, travel and other more or less regimented occupations have been accounted for, it would run to some thirty hours. Youth organizations should thus assist cadets to develop their personalities and their predilections to their own advantage and that of the community. They should, moreover, where necessary, provide the other amenities and the premises and the social background essential to the cadet movement.

Benefits would be mutual ; for every cadet would be encouraged to join some youth organization, and universal cadet training would ensure throughout the entire juvenile world a healthy outlook, a community of spirit and that leadership which most youth organizations have, as already noted, hitherto lacked. The two groups are in fact the natural complements one of the other. There should be neither jealousy nor friction between them. With the backing of universal training, youth organizations should flourish as never before. Associated with youth organizations, cadets should live and enjoy life more abundantly.

EDUCATION

Finally comes the question how is compulsory training to be associated with education and between what ages is it to take place ?

Let the latter point be taken first. Cadet ages at present run from 12 to 18, but only from their 14th to their 17th birthdays do cadets earn grants and uniforms. In future, should the Home Guard be disbanded and a new conscript army formed, a connection would be needed between cadets and the conscript army whose starting age will probably be 18 or 19 years. The gap between leaving the one body and joining the other should be made as small as possible so as not to allow time for the ex-cadet to forget his training. It would seem advisable therefore to add a year to the present grant-earning period, the whole of which should be compulsory, and make it run from the cadet's 14th to his 18th birthday.

The main query likely to arise in the association of cadet training with education is that of control. Which is to rule the roost—the War Ministries or the Board of Education ? Or will joint control be instituted ? The points in favour of control by the Board are :—

(i) Except as regards training programmes and inspection, the Board has always controlled the activities of that large proportion of the cadet forces which belong to school units.

(ii) Its schools provide the officers of school units. They contain facilities for training in all weathers and conveniences for the storage of equipment. The headmasters can fix hours of training suitable for all concerned.

(iii) In the shape of games and libraries, schools furnish a large part of the amenities required.

(iv) The school-leaving age is to be raised to 15 in April, 1945, and eventually to 16. That will entail a big addition to the number of cadets under the educational

control of the Board. Furthermore, as there are to be continuation classes in suitable premises up to the age of 18, it can be seen that the Board will continue its educational control, and will have ample accommodation at its disposal for the whole of the suggested period of cadet service. The tendency will then be for school units to increase largely in size and for cadets, after leaving school, to join old boys' units, whose headquarters may be in the Junior Colleges. Whatever the form of control selected, it is clear therefore that the Board, in a not very distant future, will inevitably exercise a great, if not paramount, influence over the vast majority of the cadets.

(v) The Board is charged with youth welfare in general, including the welfare of the cadet corps. It could do much to promote between the cadet corps and the youth organizations that co-operation which has been shown above to be so desirable.

There are, however, certain decisive objections to exclusive control by the Board. The attitude of educational authorities towards the cadet forces prior to the present war was far from encouraging. That is unlikely to recur, but it does remain a conceivable danger. Inspection and military training must in any case be out of their hands; for, however valuable the other functions of the cadet forces, their primary object is National Defence, the responsibility for which lies ineluctably on military shoulders. There is a danger too, that, unless there were fairly frequent minor inspections by military authorities, cadets might acquire an academic outlook, redolent of the class-room as opposed to a sea, field or air outlook. Finally, the Board has at present neither the staff nor the organization to control non-school units except in the realm of welfare.

It will be seen therefore that it would be fatal to accept in its entirety the majority recommendations of the Youth Advisory Council to the effect: "That after the war the general responsibility for the administration, direction and finance of the pre-Service training organizations be transferred to the Board of Education and local education authorities, acting in close co-operation with the Service Departments."¹

Were we, on the other hand, to accept the minority recommendations of that Council, namely: "That the pre-Service training organizations be administered after the war by their respective Service Departments through an Inter-Services Cadet Committee, with the Board of Education added as a fourth member or as an independent Chairman," matters would hardly be improved. For the military authorities in the role of principals would also be faced with many difficulties. In the case of school units they are necessarily intruders, for they have to come in from outside. The pay and prospects of the officers, the hours of work and leisure of the cadets, the premises, the training-grounds, would all be under the control of the Board. In fact, when the Government's present educational plans have been fully implemented, an overriding military control in time of peace would be out of the question.

There are in fact so many objections to complete, or virtually complete, control by one side or the other that it would seem desirable to institute joint control organized in such fashion as to enable all Government Departments concerned to co-operate closely. This might be exercised through an executive National Cadet Council consisting of one member from each of the War Ministries and three members from the Board of Education with an independent Chairman. Observers from other

¹ *The Youth Service after the War*, p. 23.

Ministries interested should be appointed but, though free to express opinions, should have no vote. This body should deal with all major matters of policy and finance and should be furnished with a permanent secretariat. In the lower strata, the system at present prevailing in the Army Cadet Force might be given a wider application. In it, training hours and premises are allotted in open units by unit commanders and in school units by headmasters; the administration of cadet units is carried out by the county cadet committees on which the local educational authorities are represented; and training and inspection are made the personal responsibility of the local military commander who works through the cadet unit commanders concerned.

The questions here discussed form part of the whole problem of national reconstruction, for adequate National Defence and the toughening of our moral fibre furnish the shields behind whose guard progress in other directions alone becomes possible.

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NOTE.—The Essay which tied with this for First Prize, written by Lieutenant-Commander G. M. Bennett, D.S.C., R.N., will appear in the next issue of the Journal.—EDITOR.

NIGHT FIGHTING AT SEA

By ADMIRAL SIR WILLIAM JAMES, G.C.B., M.P.

ON 16th January, 1780, Admiral Rodney with a fleet of twenty-one sail of the line was off Cape St. Vincent on his way to the relief of the beleagured fortress of Gibraltar when he learnt from passing vessels that the Spanish fleet was in the vicinity. Shortly after noon one of his ships reported a fleet in sight. He at once ordered the general chase and by four o'clock his leading ships were up with the enemy's rear ships. The action was continued through the dark and squally night, the British ships pushing on, fighting, and from time to time forcing an enemy ship to surrender. By two o'clock in the morning the wind had increased to half a gale, a high sea was running, and great difficulty was experienced in transferring the prisoners and taking possession of the prizes, which by then consisted of five 70 gun ships and an 80 gun ship.

That was the last night action between principal fleets until the Battle of Matapan in March, 1941, when the British Fleet under Admiral Sir Andrew Cunningham deliberately sought a night engagement with the Italian fleet, and destroyed three large cruisers. Between those dates the British fleet had fought many battles, but action had never been joined at night. It is doubtful if any sea Commander of his day, except Rodney, would have ordered the battle to be continued throughout the night. Though gouty and an extremely difficult man to serve, he was a great fighting Admiral and it is not without interest that, though he was lying ill in his cabin when the Spanish fleet was sighted, he never hesitated and directed the operations from his sick bed. A few years later when Lord Howe was chasing the French fleet and had the same opportunity as Rodney of continuing the fighting into the night he decided that the hazards were too great to accept. Certainly the arguments against forcing or accepting night action in those days were very strong. It would be very difficult, almost impossible, to distinguish between friend and foe. As there was no efficient method for night signalling, the Admiral would lose all control of his fleet, and it was always possible that in the confusion a weak fleet could do great damage to a fleet of much greater strength.

For a long period night action attracted no interest in naval circles, but it was revived very acutely when the French built torpedo boats at the end of the XIXth Century. These craft—small, fast, painted black, and armed with torpedoes—were recognised at once as a grave menace to the battleships that then formed the British main fleet. It seemed at first that these craft would have all the advantage at night. There was then no efficient method of illuminating them and, though batteries of small guns were mounted in the battleships, the method of controlling their fire was extremely elementary and it would have been heavy odds against these guns hitting a fast torpedo boat at night even if she was sighted. The Admiralty and sea officers of the day were presented with an extremely difficult problem. There were some people who took a very gloomy view of the situation and held that the day of the battleship was over. But, as always happens when a new weapon appears, the antidotes were found; they developed slowly, but before another major war. The torpedo boat destroyer, more heavily armed and faster than the torpedo boat, was designed, and all the larger units of the fleet were fitted with torpedo nets hung from booms which stowed against the ship's side when not in use and which were swung out in harbour so as to establish a net screen some distance from the ship's

side. These nets could also be used at sea, but the fleet could only proceed at very slow speed when they were out.

Thus began the long thirty years period during which the battle fleets of all maritime nations were on the defensive during the dark hours. Various defensive measures were slowly evolved during the great naval renaissance which took place between 1902 and 1914. In those twelve years the British Navy underwent a complete transformation in types of ships, and consequently in tactical and fighting methods. In 1902 the Fleet consisted of slow, coal-burning battleships and cruisers and a few destroyers, but by 1914 it consisted of fast all-big-gun battleships and battle cruisers and over a hundred destroyers. In 1902 the efficiency of the main armaments was tested annually at a range of about 2,000 yards; by 1914 the fleet could open fire accurately at 20,000 yards. Remarkable improvements were concurrently made in the control and rapidity of fire of the batteries of small guns which were mounted to ward off night attack by destroyers. The illuminating power of the searchlights was also improved, but by 1914 they were still manipulated by hand to orders received through voice pipes, and were never really efficient. An attacking destroyer might be picked up by a light sweeping through an arc, but the task of holding a fast moving target in the light was extremely difficult. During the same period the submarine had been developed and had become a very potent weapon in the hands of skilled men. The reply to the submarine was the destroyer screen, and before 1914 it was accepted that battleships, when cruising should always be protected by a destroyer screen. This screen had a dual purpose, as it was always maintained at night and many trials were carried out to establish the best form of screen to intercept destroyers bent on attack.

In 1914, therefore, the British main fleet was still entirely on the defensive at night. The guns were now fitted with night sights, but director firing was not yet installed, and it was the gunlayers and trainers at the guns who had to find the target and hold it. Night fighting exercises had proved that this was not an easy task; the men looking through the gun-sighting telescopes were blinded by the flash of firing and very often could not pick up the target again, and this, added to the fact that the searchlights often failed to hold the target, produced much inaccuracy in the night firing target practices. It is not surprising that the officers of the day held the same view as Lord Howe. The introduction of wireless and special signal lights would, perhaps, enable the Commander-in-Chief to keep control of the fleet, but it was still highly probable that a weaker fleet would emerge victorious from a night action owing to the confusion and uncertainties of engaging in the dark and the inefficiency of the gun and searchlight controls.

These drawbacks would not be so apparent in an action between single ships or very small squadrons, but to seek night action with the Grand Fleet, which when deployed covered over seven miles, was not regarded as a practical proposition at a time when the whole of the British war effort depended on it being able to contain the German main fleet and bring it to battle if it emerged from its harbours to attack our sea lines of communication. Indeed, the difficulties of engaging in the dark were revealed on the night of the Battle of Jutland when a British cruiser that had made the recognition signal suddenly found herself under heavy fire. The recognition signals of that day were coloured lights and it was the practice to challenge an unknown ship and withhold fire until she had the opportunity of making the correct reply. On this occasion the German ship knew that the ship she had sighted could only be a British ship and took no notice of the recognition signals. It was this experience that subsequently led to the practice of giving orders to the destroyer

screen to open fire on every ship that approached, without challenging, when in waters where the enemy was expected, and also the corollary that heavy ships should not attempt to join the main body during the night.

Admiral Jellicoe, the Commander-in-Chief of the British Fleet at Jutland, was an officer of very great experience who had taken a leading part in the training of the fleet for war and was one of the committee who designed the first "Dreadnought." He never had any doubts about the inadvisability of forcing a night action. In his Jutland dispatch he wrote:—

"I rejected at once the idea of a night action between the heavy ships as leading to possible disaster owing, first, to the presence of torpedo craft in such large numbers, and, secondly, to the impossibility of distinguishing between our own and enemy vessels. Further, the results of a night action under modern conditions must always be very largely a matter of pure chance."¹

It is interesting too to note that at the end of the Jutland day the British Fleet was close to the German bases and if the German Fleet had been specially trained for night battle it had a wonderful opportunity that would probably never occur again. In a night battle the superior numbers of the British Fleet would have had far less influence on the outcome than in a day battle, and whilst damaged German ships would have made their way back to harbour, any badly damaged British ships would have been a very long way away from their bases. But the German Commander-in-Chief was evidently no more anxious to accept the hazards of night battle than the British Commander-in-Chief.

During the ten years after the first World War there was a steady improvement in the mechanics of night fighting. The director method of laying all guns from a central and commanding position became universal, and with its introduction one of the insuperable difficulties of night fighting was removed, as the layers and trainers no longer had to pick up the target and hold it in their sights. All they had to do now was to follow pointers, and the layer at the master sight of the Director was comparatively free of the effects of flash and blast. Great improvements were made also in the manipulating apparatus for searchlights. Instead of their being man-handled by crews endeavouring to carry out orders conveyed by voice pipe and frequently lost in the roar of the broadsides, they became electrically manipulated from the control positions. The star shell was produced and could be fired by medium calibre guns and made to burst high above the target so as to illuminate a wide area of sea. From a technical point of view, the British Navy was slowly moving towards a condition in which night fighting had lost some of its hazards.

It was not, however, till 1930 that Admiral Sir Ernle (afterwards Lord) Chatfield, then Commander-in-Chief of the Mediterranean Fleet, began to turn these technical improvements to good account. Chatfield had been Beatty's Flag Captain at Jutland and had experienced the cruel disappointment when the German Fleet escaped destruction because the German Admiral, by a series of retreats, had avoided day battle. Furthermore, the British fleet was relatively no longer as strong in

¹ The official historian of the war enlarged on the theme; he remarked:—

"The sun had set nearly an hour before; the gloom all round was dispersing into darkness, and any further attempt to engage must involve a night action. This, like Lord Howe on the same day in 1794, he was determined not to hazard. Modern developments had only hardened the long-established objections which condemned fleet actions by night as inadvisable."

comparison to potential enemies as it had been in previous periods of history, and if efficiency at night battle could be brought to such a pitch that it could seek night action instead of avoiding it, its power to carry out its age old task of controlling the sea lines of communication would be much enhanced. But before it could reach that standard much had to be done. The Fleet had to become night-fighting minded. Exercise programmes were already congested with the many practices necessary to keep the fleet efficient for day action and, as the annual allowance of fuel was rationed, it was not possible to spend much more time at sea. But the programmes soon began to reflect the new spirit: night encounter exercises, night firings, and experiments to discover the best night cruising formations became permanent features. No relaxation in the training of destroyers for night and day attack could be permitted, as though the battleships were now being trained for night battle, the destroyer still remained the most potent night attacker. Every opportunity for training in shadowing at night was also taken. The task of the Captain of a shadowing ship is made more or less difficult according to the visibility, the bearing of the moon and the state of the sea. He has to make quick decisions as to whether to report to or withhold signals from the Commander-in-Chief. When he reports, the signals must be absolutely accurate, yet they have to be handled by many people before they reach the Commander-in-Chief. The Captain, watching every move of the enemy, orders the signal to be made; the navigating officer then has to give the accurate position of the ship, without which the signal is useless; the coder then puts the signal into code; the wireless operator then sends it; the wireless operator in the flagship then receives it; and the coding rating decodes it. All these men have to be highly trained and absolutely reliable, and with every exercise the shadowing ships become more efficient.

After two years, Chatfield was able to say that it would never again be possible for an enemy fleet to escape destruction under cover of darkness, and that night fighting would be our great opportunity in another war. These were prophetic words. He was succeeded by his Second-in-Command, Sir William Fisher, who continued the training and seized an opportunity of demonstrating the efficiency of his fleet during the combined manoeuvres of 1934. Fisher had the reputation of being a brilliant and fearless tactician and frequently exercised his ships at high speed in close order. He also had been a great help to Chatfield in the development of night fighting. The object of the Home Fleet in these manoeuvres was to escort transports to a landing place somewhere on a 400 mile coast line represented by the Spanish-Portuguese coast. Fisher's object was to frustrate the landing. The Commander-in-Chief, Home Fleet, in the battle fleet escorting the convoy, endeavoured to draw his opponent away to the South by sending his battle cruisers on a southern route whilst he took a northern route. In the early stages a gale blew up and aircraft, of which Fisher had a superiority, could not fly. The battle cruisers were the first Home Fleet ships sighted by one of Fisher's patrol line, but almost immediately afterwards a cruiser reported the battle fleet. Fisher decided at once to proceed at high speed and bring the enemy main fleet to action during the night and before the battle cruisers could reinforce. High seas were running, but he pressed on with no lights showing, and about midnight sighted his quarry and swung his ships into battle line at a range of 6,000 yards, switching on searchlights and filling the sky with star shell. Mr. H. A. L. Fisher—the famous historian, who joined his brother after the manoeuvres wrote: "His brilliant victory is regarded by all the experts as an epoch-making achievement and very daring, for he was steaming at 16 knots against the enemy in the darkest of nights, every ship with

its lights concealed, until the moment came to light up and show the Home Fleet that they were surrounded." Chatfield, by now First Sea Lord, wrote to Fisher: "It must have given you the greatest satisfaction after all your work and original thought about night actions to have had such a wonderful opportunity and the courage and skill to carry it out under the weather conditions."

This night attack left a profound impression on all who were present and, indeed, on the whole British Navy. It was no longer a question of training the Fleet to be night-fighting minded; they were night-fighting minded. So, when for the second time in a quarter of a century the lights went out in Europe and the British Fleet was once more on a war footing the senior officers were as eager to force night action if the conditions demanded as they were to force day action in earlier years. All the hard work and thought of the preceding ten years was put to the acid test on the night of 30th March, 1941, when Admiral Sir Andrew Cunningham, in chase of an Italian Fleet, decided to engage in night action and destroyed three enemy cruisers in a few minutes. The conditions were just those envisaged by Chatfield. The Italian Fleet was retiring and only 300 miles from its bases. The Admiral could not afford to subject his fleet to the heavy air attack to which it would be open if he approached too close to the enemy's bases in daylight. If he was to bring the Italians to action it must be at night. The full import of the Battle of Matapan has tended to escape notice, because the armament of the battleships was so much more powerful than the armament of the cruisers, but the action proved that the Fleet had attained a remarkable efficiency at night fighting. A destroyer illuminated a cruiser; the battleships "Warspite" and "Valiant" both fired a broadside and both broadsides hit. That was her end. Another ship was silhouetted in the destroyer's searchlight; the "Barham's" first broadside crashed into her, and a little later another ship, illuminated by searchlights and star shells, came under fire of all three battleships and all the broadsides went home simultaneously. The accurate manoeuvring of the Fleet at night, the quick turn away when the enemy fired torpedoes, would not have surprised a naval officer of an earlier decade, but this remarkable gunnery performance was something that he would have regarded as impossible and, indeed, it would have been impossible before those years of hard work and development of night fighting instruments.

It was nearly three years later, in December, 1943, that the training for night fighting was again put to the test. It was of vital importance to the combined war effort of the Allies that supplies should reach the Russians, and the only ports of discharge available were in North Russia. The Germans, aware of the importance of the convoys from British ports to Murmansk, based a large number of aeroplanes and their capital ships in Northern Norway. Some of the fiercest fighting of the War has taken place on this convoy route. In the summer months the convoy escorts had to fight off heavy attacks by aeroplane, but in the winter months when there is only a short twilight in the middle of the day, the constant menace to the convoys was from the enemy's surface vessels. The British dispositions were made to meet this menace, and training for night fighting loomed large in the exercise programmes of our Fleet.

At 9.30 on the morning of 26th December, Rear-Admiral Burnett sighted the "Scharnhorst" steering towards the convoy. He had had long experience of shadowing and of fighting in those dark, cold waters. Officers and ship's companies less well trained for this difficult work would probably have lost the enemy in the prevailing bad weather, particularly as she showed a high turn of speed and several

times made drastic alterations of course. But the cruisers never lost touch, and as the Commander-in-Chief received accurate knowledge of all the "Scharnhorst's" movements, he was able to come up with her at 4.49 p.m. The value of those years of preparation was at once revealed. The "Scharnhorst" was about six miles distant when sighted, but the star shells at once illuminated her, and a minute later the "Duke of York" opened fire with her broadside. It is of interest that the enemy did not reply till ten minutes later, and this is some indication that the German Navy had not gone through the same years of hard work and preparation. The "Scharnhorst" was steaming faster than the "Duke of York," and in order to prevent her escape, Sir Bruce Fraser ordered his destroyers to attack. Once again the training of years proved invaluable. That audacious engagement at close range of a heavy ship whose secondary armament was still efficient filled with admiration everyone who witnessed it. The torpedoes got home and the "Scharnhorst's" speed was reduced. The "Duke of York's" broadsides continued their work of destruction and by 7.28 p.m. the enemy was almost stopped. She was then finished off by torpedoes from cruisers and destroyers.

A striking feature of this action was the accurate control of the whole operation by the Commander-in-Chief. The cruisers, the destroyers and his own flagship all fitted in to a well-thought-out plan. For the rest it was a further proof that every unit of the British Fleet knew what to do and how to do it in that most difficult of all types of warfare—night fighting at sea.

One hopes that Rodney is watching these stirring events. If he is, he no doubt said during the Battle of Matapan and this last battle with the "Scharnhorst": "Indeed, they have not forgotten me."

THE HOME GUARD

By LIEUT-COLONEL J. JELLEN, HOME GUARD.

THE Home Guard had its genesis in a phrase. On 13th May, 1940, Mr. Winston Churchill, addressing the House of Commons for the first time as Prime Minister, defined the policy of his new administration in these words:—

“It is to wage war by sea, land and air with all our might and with all the strength that God has given to us.”

This sentence crystallized the feelings of the ordinary man and woman, for the threat of invasion lay heavily upon the land. They began to tell themselves that this was no longer purely a soldiers' war. They were all in it and it was up to them to do everything in their power to help the soldiers repel the enemy if, or rather when, he reached these shores.

It is necessary in any appraisal of the Home Guard to consider the state of mind of the people of this country in those days of May, 1940, for it was responsible for establishing it on a firm enough basis to enable it to survive unimpaired four years of waiting for an enemy who has not come, and looks less like coming each day. Unlike Othello, the occupation of the Home Guard has not gone; it has merely modified its character, in which direction will be considered later. Let us return for a moment to the days when invasion was more than a probability.

Old men and young men, many of whom had never handled a lethal weapon in their lives, began to look round for something with which to kill the German parachutists should they descend in their district. Their wives and sisters helped in the search and looked for missiles of their own with which to try to injure the invaders when they came to close quarters. Many of those who felt that this was beyond their strength or capacity made their husbands and brothers promise that if the Germans came they would first kill them before themselves seeking death in fighting the enemy. There were no heroics; merely a cold recognition that these islands could not hold both themselves and the Hun invader alive.

The War Cabinet was well aware how the people felt about these things, and it resolved to canalize this mass-emotion into the only really useful channel—the creation of an unpaid volunteer force for local defence. These Local Defence Volunteers could go on with their ordinary daily work, yet be available to cope with parachutists or possible sea-borne invasion. They would be given such arms as could be spared from the scanty resources of the Army, and these would be supplemented to some extent by weapons in private possession such as shot-guns and revolvers.

It is doubtful if the Government and the Army Council realized what sort of friendly dragon's teeth they had sown. They probably envisaged something quite different to what the Home Guard has become. But having decided upon their plan, the Government acted with commendable celerity. On 15th May, 1940, Mr. Anthony Eden, who was then Secretary of State for War, made the famous broadcast which established the Local Defence Volunteers. The actual machinery was set in motion a day or two later by a priority telegram to all existing military areas. The telegram gave the skeleton organization of the L.D.V. consisting of an unpaid Organizer for each Area Headquarters. Each Area was to be divided into zones with an unpaid volunteer Organizer in charge of each. The Organizers were to

establish their headquarters and proceed to select men from the lists at local police stations in preparation for enrolment. The qualifications of volunteers were to be that they must be men between the ages of 17 and 65, British subjects, and of reasonable physical fitness.

The response to Mr. Eden's broadcast was immediate and vast. In every town and in every village men of all classes, ages and sizes began to besiege the local police stations. They came in their hundreds and thousands, intent only upon one thing, to join up as quickly as possible, secure a rifle as quickly as possible, and get on with the job of preparing to meet the enemy. The War Office expected nothing like these masses of volunteers; certainly they had no rifles available for even a small proportion of the number; but in this, as in most other matters connected with the organization and equipment of the Home Guard, they displayed what many welcomed as an unexpected flexibility of mind and faculty of adaptation.

The military authorities laid down a general plan and were prepared to let the urgency of the moment and the force of circumstances shape it to some extent. They gave much latitude to local commanders and were well rewarded for this trust, for some semblance of a fighting force soon began to evolve. The London Area affords an interesting example of how the Home Guard grew. Zones were organized in London to correspond with the police divisions and bearing the letter of the police division concerned. Each contained a varying number of battalions in proportion to the number of inhabitants. An allotment of 6,000 rifles was made to the whole area and it was decided that the number of volunteers to be raised in each zone should be three times the number of rifles allotted to that zone. One may give these figures now because the arms situation has undergone a complete transformation, and considerable modifications have been introduced also in the organization of the London Area.

At the outset the main difficulty was to find experienced officers and non-commissioned officers to train the volunteers. The L.D.V. had to start from scratch in this respect, for no peace-time cadre existed. It was possible for the Regular Army to expand with comparative ease because they had the necessary officers and N.C.O's. at hand. It is true that the volunteers included a fairly large number of men who had served in the last war. It also included some who had seen service in wars previous to that; but with the best will in the world these good people could not be expected to train a force in the modern methods of warfare required to deal with a highly equipped, resourceful and skilfully led enemy. Nevertheless, it was found possible to obtain a number of ex-officers and N.C.O's. who could make a start with training. They gave their service whole-heartedly, and soon in every part of the country instruction in handling the rifle was proceeding apace. Battalion headquarters and the necessary staffs began to spring up like mushrooms, and under the general guidance of the Inspectorate set up by the War Office, the whole organization began to function steadily. Vulnerable points began to be manned even before the men were sufficiently trained to be able to repel a possible parachute landing, but determination and devotion to duty made up to some extent for training deficiencies.

Now the whole picture in regard to training is completely transformed. Each battalion includes Regular adjutants for training and Captains for administrative duties and each battalion also has its establishment of permanent staff instructors. Training goes on every night and every week-end, not only at drill halls and firing ranges all over the country but in the Summer at specially organized week-end

camp where the Home Guard live under canvas and are able to practise fieldcraft and battlecraft. In addition, special schools have been set up in purely urban districts to enable the best methods of street fighting to be assimilated.

In the beginning, most of the Home Guard units possessed only token equipment—a few suits of denim and a few rifles, but the officers and men made up in enthusiasm and fervour what they lacked in equipment. Two experiences of those early days remain in the mind. One was the expression on the face of one volunteer receiving a rifle for the first time. He took it with a beatific smile as if a long cherished dream of happiness had at last become a reality. One could see how his mind was working. At last he had a weapon with which to try to beat back the invader. The fact that there was probably no ammunition for it was not so important for the moment. No doubt it would be forthcoming in due course. Meanwhile, he could always use the butt.

Another impressive experience was to see a squad of men wearing for the first time their denim uniform and forage cap. They stood at attention at one battalion headquarters without rifles, suggesting nothing so much, as one of them afterwards observed, as a gang of elderly convicts trying to earn some remission of their sentence by good conduct. But they did not care. They were in uniform—a first step to being trained and armed for combat with the enemy. No volunteer liked his denim uniform, but he put up with it until the War Office could let him have proper battle-dress. This was not so long in forthcoming. To-day, with battle-dress not a whit inferior to the Regular Army garment, anklets, web equipment and what-not, the Home Guard bears little semblance to the L.D.V. of the early days.

The general public did not perhaps realize the transformation that had taken place both in the equipment and training of this force until last year, when a parade was held in Hyde Park in celebration of the third anniversary of the Home Guard. This month (May) we celebrate the fourth anniversary of its foundation. It marks another great step in the training and general equipment of the force. To-day, members of the Home Guard who accepted with alacrity whatever weapons came to their hand sniff at a wide range of automatic weapons and long for self-propelled guns and other luxuries. At an early stage in the career of the Home Guard, the United States providentially came to the rescue in the matter of equipment, and by their good-will the force received American rifles. These weapons were welcomed like manna from Heaven. The problem to-day is not, as in the past, to get arms, by hook or by crook, but to select the best of those which are being so lavishly placed at the disposal of the Home Guard.

To eke out the arms and ammunition of the Home Guard in its early days many ingenious expedients were devised. The ideal of "one man one weapon" was still far off, and the men had to have something other than their fists to fight with. From higher authority came the instruction that the role of the Home Guard would be to deal with the enemy "by whatever means." The operative words for the volunteers were "by whatever means." Those who had no weapons—and there were very many, particularly in the built-up London areas—began to train in unarmed combat and in a species of urbanized jungle warfare. A favourite anti-tank weapon manufactured locally was the Molotov Cocktail. These took the shape of milk bottles containing an inflammable mixture called by some "Borgia's brew." Soon most Home Guard headquarters assumed the misleading appearance of milk distribution depots. The issue of cudgels and pikes was also made. Their moral effect as personal weapons was probably higher on those who carried them than the military

effect was likely to be on the enemy, but it was something to hit the Hun with until something better came along.

Among the articles of equipment that eluded the Home Guard persistently for some considerable time were steel helmets. The authorities realized that these ought to be made available both on grounds of morale and as a precaution during air raids, but they were not in a position to supply them in the requisite quantities. The Home Guard looked enviously at the Civil Defence who seemed to have no such difficulty, and discontent became particularly pronounced as the air attacks developed, when so many members of the Home Guard rendered signal service and suffered many casualties.

Many administrative problems had to be solved as the Home Guard gained cohesion and strength. One of the earliest was the status of the force under International Law. The danger of exposing the Home Guard to the charge of being franc-tireurs had to be avoided; indeed, the matter was brought to a head, almost as soon as it was formed, by German denunciations. The War Office had no difficulty in establishing that the force fulfilled all the requirements of International Law, and this was followed by another decision that the use of shot-guns and ordinary sporting cartridges was legal.

Another problem related to the enrolment of British subjects of foreign parentage. It was originally decided that only applicants could be accepted for enrolment whose father was a British-born subject. This at the time was a necessary safeguard against Fifth Column activities, but it had the effect of ruling out at least one V.C. of the last war whose father happened to be of foreign origin. The ruling was subsequently modified and the position to-day is that all men resident in Great Britain are eligible for enrolment or liable to direction under certain conditions not only if their parents are of foreign nationality or origin, but even if they are of enemy origin. The police and the security services see to it that undesirables are kept out.

This is a good moment to refer to the inestimable services rendered by the police to the Home Guard. It fell to them not only to take the preliminary steps of registering the names of volunteers, but to "vet" the subsequent enrolments. The danger of Fifth Columnists has proved in the event to be less great than was thought, but the authorities could take no risks with the lessons of Holland and Belgium so plainly before their eyes. This meant a great volume of extra work for the police which was carried out efficiently and uncomplainingly. But it would be lacking in candour to say that the relations between the police and the Home Guard were all that could be desired in the early days. The fault, it must be admitted, was not that of the police but of some of the more zealous volunteers who in their actions did not realize that they were usurping the functions of the police and sometimes impeding them in the execution of their duty. But that phase soon passed and now the Home Guard and police work together in perfect harmony.

A word must now be said about the role of the Home Guard. This was originally defined as "To deal without delay with the enemy arriving by whatever means." Commanders of L.D.V. units were instructed to take action on their own initiative, their role being entirely local. They were not to leave their own localities unless orders to that effect were received from the Regular officer in operational control of them. If parachutes fell in their zones of responsibility, they must deal with them; if parachutes were out of their zone of responsibility, they would put out and man road-blocks to be established in such a manner as to give unimpeded passage to

military traffic on its way to mop up the parachutists. Mr. Churchill perhaps best defined the role of the Home Guard when he declared on 4th June, 1940: "We shall fight on the beaches, we shall fight on the landing-grounds, we shall fight in the fields and in the streets. We shall fight in the hills, we shall never surrender."

The present role of the Home Guard does not differ in essentials from what it was originally. It is to deal with airborne troops in large or small numbers. Other tasks have been superimposed on this role, notably anti-aircraft duties, coast defence, and the latest of all developments, Civil Defence, but with these we will deal in a moment.

The view of the military authorities, it may be assumed, is that a large scale invasion such as was threatened when the Home Guard was formed is no longer probable. The whole course of the War and the Allied prospects of victory would have to be completely reversed before this danger again became imminent. But what can and may happen is a series of sabotage airborne raids organized on a sufficiently large scale to disrupt communications and destroy other vital services. It is in order to deal with these attempts that the Home Guard must always remain at a high state of preparedness. The raids may take place anywhere, and it is the role of the Home Guard to be ready to meet them everywhere.

To the average Home Guard what counts is not that a full scale invasion is no longer likely but the fact that German parachutists may still be able to land in this country. So long as that is possible, be the arrival even in small numbers, he feels that he is fulfilling the role which is his *raison-d'être*. The French had a battle cry in the last war: "They shall not pass." The Home Guard has inverted it to read: "They shall not return." All their training and all their energies are now bent to one purpose, not only to ensure that the parachutists or any other kind of Huns who reach these shores by whatsoever means will not get away alive, but be prevented from doing serious damage before they are dealt with.

As to the role of the Home Guard in the immediate future, it is evident enough that this must assume an entirely new importance. The Allied invasion of Western Europe is about to take place—it may even have taken place by the time these lines are in print—and it will fall upon the Home Guard to assume a much greater responsibility for guarding these shores and converting the country into a sure base. An even greater degree of alertness will require to be maintained when the Allied troops begin to pour overseas and while the operations are taking place. Not only will the danger of enemy airborne raids be greatest then, but the Germans may apply other counter-measures entailing new methods of attack on this country, either by pilotless planes or possibly rockets, or both. If these counter-measures materialize they must inevitably throw a heavy strain on the Civil Defence services, and the Government have decided that the Home Guard shall render full scale assistance to civil authorities. Steps to enable this additional role to be carried out have already begun in the way of special training. Actually, this work will not be entirely new to the Home Guard, many members of which have rendered in the past, and even now render, great service to the civil authorities during air raids, either as fire-fighters, rescue workers or in helping the police.

It is characteristic of the spirit of the Home Guard that it takes on as a matter of course any job that helps to win the War, even though it is not strictly military in scope. This of course is an inheritance from the Regular Army, the personnel of which will tackle anything they are ordered to do, whether it looks like a soldier's job or not. The only difference is that they do it in a soldierly way and that is pre-

cisely how the Home Guard may be expected to carry out their new Civil Defence duties.

They have already shown their powers of adaptation in other ways. One is in the manning of A.A. batteries and Coast Defence, and another is in the formation of bomb disposal squads. The decision of the authorities to employ members of the Home Guard for anti-aircraft work embodies not only a wise policy but one that was specially welcome to the Home Guard as affording the opportunity to "have a crack at Jerry"—except perhaps to the officers of the General Service battalions who had seen the men through their military teething troubles and had trained them.

In the nature of things, only the fittest men in the Home Guard can be transferred to the A.A. batteries, which means the men who form the cream of the General Service battalions. This did not matter so much before the man-power situation became acute, but to-day, when the call is for more and more men for the batteries and the intake for the General Service battalions becomes ever more restricted, the process of transferring Home Guard for A.A. work is an extraordinarily painful one for the battalion officers. Yet the pain is borne with fortitude and the transfers are warmly encouraged; for every officer recognizes the vital importance of serving the guns. The men who go to the batteries and the officers who see them go each in their own way acquire great merit.

A word also about the bomb disposal squads: these consist of men from what are known as the Utility Company battalions—public utility undertakings such as gas, electrical and water services. In the past, some of these men had perhaps to face no greater danger than that involved in dealing with a gas leak or a burst main, which is an entirely different thing to tackling an unexploded bomb, but there has never been a dearth of volunteers. For that matter, the same brand of courage is displayed by every Home Guard who handles his first live grenade.

Something must now be said about the Factory battalions. In May, 1940, the then G.O.C.-in-C, Home Forces—General Sir Walter Kirke—appreciating the great advantage of guarding factories engaged in vital war work by static elements, suggested that these factories should form their own Home Guard detachments. The suggestion was taken up with alacrity and soon there was scarcely an important factory which did not possess its own unit.

But, as the months went on, these Factory battalions began to partake more and more of the character of small private armies. They were only loosely attached to the General Service battalions and were somewhat inclined to resent any apparent attempt to infringe on their sovereignty. From the point of view of training and administration this state of affairs was obviously undesirable and gradually they were brought into closer relation with the parent body of the Home Guard. The present position is that while their essential task is to defend their own factories, they take a much wider view as to where the defence of the premises must begin. The factory boundaries are no longer the limit, and perimeter defence schemes work in with the larger schemes of area defence. In every other respect the Factory Home Guard is in the same position as the General Service Home Guard and every whit as efficient.

Reference has been made to the Utility battalions and it may be as well to explain that they comprise the Railway Companies, including London Transport; the Post Office; the Water, Gas and Electricity undertakings; and organizations like the Port of London Authority. Each undertaking has its own battalions and all fit into the general defence scheme. It is for each Utility Company battalion

commander to decide how many men are required to defend his own particular undertaking. The remainder are available for the defence of the whole local area under dispositions made by the Regular military commanders.

While the role of the Home Guard has always been primarily static, this has not impeded the evolution of mobile tentacles; for example, mobile columns are now a feature of some Home Guard areas, while in the London District there is not only an efficient Transport Column but an equally live Taxi Column. Nor is mobile sub-artillery lacking.

We come now to the biggest problem that confronts the Home Guard, that of man-power. In a lecture delivered to the Royal United Service Institution in January 1942,¹ the Director-General of the Home Guard—Major-General Viscount Bridgeman—dealing with the man-power situation as it then existed said:—

“Man-power is getting shorter as industry and armed forces expand; when the Home Guard was first raised there were many more men available to volunteer than there are now. Ever since then the numbers have been harder to get; more men were called up each month than there were lads attaining the age of 17; men were working harder and harder and had less time to spare for Home Guard duties.”

What he said then remains true to-day, except that the position has been rendered more acute, but the steepest hurdle has been successfully surmounted, namely that of compulsory enrolment. In the same lecture Lord Bridgeman ventured to forecast that compulsory enrolment, which had just been announced, would not cause much trouble. It was a hazardous thing to say, for compulsion cut right across the whole tradition of voluntary service. More than that, it might have extinguished the spirit underlying the institution of the Home Guard. The possibility of wholesale resignations on the part of those who could legally get out had to be faced; but the Director-General's faith in the Home Guard proved to be well founded. There were few resignations, and the Home Guard accepted the transition to compulsion as a wise and natural step. If it has made one iota of difference to any one battalion, that battalion has still to be discovered. As Lord Bridgeman put it when he made his forecast:—

“The time arrived when there remained few volunteers and a large number of slackers to whom the call for volunteering did not appeal. The policeman had to come.”

There is no such thing now as volunteers and pressed men; there is only the Home Guard—a branch of His Majesty's armed forces ready to do its duty whenever called upon; and it now has the tools with which to do the job.

The Home Guard comes only to a limited extent under King's Regulations. This cannot be otherwise, having regard to the fact that its members carry out their normal civil employment in addition to performing their Home Guard duties. But the force has its own “Bible,” namely Home Guard Regulations in which are codified all the Army Council Instructions appertaining to the administration of the force, its governance and the conduct of its members while on duty.

Operationally, the Home Guard comes under the direction of the G.O.C.-in-C. Home Forces through the ordinary military channels, but much of the routine administrative work is carried out by the Territorial Army and Air Force Associations. The Territorial Associations are the Record Offices of the Home Guard and through

¹ See R.U.S.I. Journal for March, 1942, p. 140.

them also pass all claims for disablement allowance, payment of subsistence allowance, travelling claims and so on. It is the Territorial Associations who forward to Ordnance all indents for clothing equipment and other supplies which they subsequently distribute to the Home Guard battalions in accordance with the allocations of Military Commands. They also give the necessary facilities to the battalions to open imprest accounts. No Home Guard commander has anything but praise for the way in which the Territorial Associations do their work, only a part of which has been indicated.

Before concluding, it is right to explain one special aspect of the value of the Home Guard to the country. It is the increased benefit that it has conferred and is still conferring on the Regular fighting Services by making available to them men who have already been trained to a fairly high standard. Men passing from the Home Guard to the Services do not go there as raw recruits; they go there as disciplined weapon-trained personnel, carrying the imprimatur of a defence force, the attainments of which are often gratefully acknowledged by the military commander under whose orders they come.

Finally, a word as to the future of the Home Guard. A decision as to whether it shall be continued after the War, either on a voluntary or compulsory basis, or at all, has yet to be taken. But this much can be said; the intimate mixing of all classes in the Home Guard has fostered a spirit of comradeship and understanding which can but be of the greatest value to the nation in the difficult period that will begin when hostilities cease.

CHINA AND THE WAR

By COLONEL J. V. DAVIDSON-HOUSTON, M.B.E.

FOR many years before the present war, the popular Press and pro-Chinese writers have been doing China great disservice by exaggerating her military efforts and producing the impression that foreign intervention was not essential to the defeat of the Japanese invaders. It is the intention of the writer, who has been in frequent contact with both Chinese and Japanese forces during the period 1927-1942, to present a balanced view of China's military position and of her value to the Allied cause.

CHINA'S ATTITUDE TO THE PRESENT WAR

The cause of China's membership of the United Nations is her struggle with Japan—a struggle which began in 1894 and has continued to the present day, marked by a series of aggressions such as the invasion of Manchuria (1904), final annexation of Korea (1910), the Twenty-one Demands (1916), the Shantung incidents (1928), seizure of Manchuria (1932), and culminating in open warfare in 1937.

Although the Chinese have no natural affection for any foreign nation, Japan is the most generally recognized and longest established enemy, regarded with peculiar dislike as a precocious pupil who has dared to round on his venerable teacher. The Chinese as a whole are not really interested in any other campaign except in so far as it bears upon the Sino-Japanese conflict. They bear no grudge to Germany. Their Government did, indeed, declare war on her in 1917, thereby regaining possession of Tsingtao and abolishing German extra-territorial rights; but they were well satisfied with the commercial relations which grew up between the two Great Wars, and Von Falkenhausen's Military Mission did much to prepare their army for the battles of Shanghai and Nanking. Nor does the cause of Russia inspire universal enthusiasm. The Soviet Government, as the ally of the Chinese Communist Party, was for nearly seven years unrecognized by the Kuomintang regime. Moreover, Russia's preoccupation on her Western front and her present relations with Japan have prevented her from giving material help to Chungking. Another disappointment has been the ambiguous attitude of the Soviet's former protégés, the Chinese Red Armies, whose influence will be considered later.

It should be added that anti-Fascist war-cries cannot be expected to evoke much response in China, since the Kuomintang one-party administration has more in common with totalitarian systems than with parliamentary democracy, without of course the vicious imperialism of the former.

Attention must also be paid to the fact that the form of Chinese resistance differs from the Japanese, and indeed from that of most other Powers, in that it is inspired by racialism rather than nationalism. The Chinese have for so many centuries considered themselves the only civilized part of the human race, surrounded by an ocean of barbarians, that they have come to think of the world as divided between Chinese and foreigners. To the average Chinaman all foreigners are alike in that they are non-Chinese. The Celestials are thus bound together *vis-à-vis* other peoples not by any political system but simply by *being Chinese*, by sharing a culture, a language, a code of manners distinct from any other. This is the strength and the weakness of China. She is not driven by any political philosophy or frenzied doctrine; she is not aware of any obligation to enforce her own way of thinking on the outside world, nor would her citizens dream of sacrificing their lives for such

a consummation. This confident and matter-of-fact outlook, however, allows the civil population to acquiesce in the occupation of its territory by foreign armies, knowing that everything, including invasion, is ephemeral with the exception of its own indestructible identity. Many Chinese are satisfied that this philosophy is more profitable than opposing ill-equipped forces to a first-class Power; if one asks any of the numerous young men who have fled from enemy-occupied territory and are now serving in shops at Calcutta and Bombay whether they would like to join their armies in China, one is met by a smile which suggests indulgent reception of a rather naïve joke.

This attitude would probably have prevailed in 1937 (it had in fact done so in the feudalistic northern provinces) but for the Kuomintang, which was convinced that only a nationalist outlook on Western lines could secure China's independent existence in the modern world. Chiang Kai-shek and the Kuomintang understood that Japan's expansionist philosophy would sooner or later make war inevitable, not only with the Chinese Government but with the foreign Powers who had interests in China, and their foreign policy and propaganda were directed to securing the intervention of Great Britain and America. One can understand the irritation with which they viewed the complacent neutrality of these Powers, and the impatience with which they awaited the inevitable conflict.

It goes without saying that the events of 1942 were a source of great disappointment and disillusion to the Chinese. The United States retained a certain amount of "face" through the operations of their air force, their closer personal contacts, and the financial and material help which China badly needed; but British prestige fell very low and will not recover until we have undertaken successful operations *in the Far East*. As already stated, the Chinese are not greatly concerned with the War in the West, and the victories of the Eighth Army do not in their eyes compensate for our failures against the Japanese.

It is evident from the foregoing that only exceptional leadership could have succeeded in keeping a national army in the field for over six years against an enemy greatly superior in training and material resources. Such leadership has been supplied by Chiang Kai-shek, who now wields a prestige and authority unequalled since the fall of the Manchus. Although not a General in the European sense, he sincerely believes in the ideals of the United Nations, and his Government would never make a separate peace with Japan. His eclipse would be a loss to the Allied cause and to Chinese nationalism comparable with the removal of Marshal Stalin.

THE VALUE OF THE CHINESE ARMED FORCES

Having assured ourselves that the Chinese army will remain in the field so long as Marshal Chiang leads it, let us examine its strengths and weaknesses in order to appreciate its value to the United Nations' Far Eastern campaign.

The present Chinese Army came into existence some fifteen years ago. Before that time the country was infested with regional and provincial forces, whose rapacious war lords had maintained a state of inconclusive civil war since the revolution of 1911. In 1927, however, the Nationalists under Chiang Kai-shek defeated the Northern combination and succeeded in establishing an administration at Nanking which during the next ten years consolidated its position as the recognized Central Government.

The Nationalists (Kuomintang), as soon as they had strengthened their hold over the Yangtze Valley, broke with the Chinese Communist Party and dismissed

the Soviet Military Mission which had aided them in their campaign. In 1928 a mission composed of unemployed officers from the German Army was inaugurated at Nanking and began to train Chiang Kai-shek's forces on modern lines. The Germans realized China's industrial limitations, and their teaching was based upon a high proportion of automatic weapons and the use of mortars in place of artillery. For the organization and training of their air forces the Chinese relied upon Powers then regarded as paragons of the flying world, and there were contacts with Great Britain, the United States and Italy.

After the signing of the Anti-Comintern Pact and the outbreak of Sino-Japanese hostilities in 1937, it was anomalous to find the German Mission still with the Chinese forces, and it was withdrawn in 1938.⁵ The Germans had worked conscientiously, but limitations of material had prevented the organization on modern lines of more than a minor fraction of China's vast army. Oil, motor transport and practically all types of gun and shell had to be imported from abroad. The air force, owing to financial limitations and the lack of an aircraft industry, never exceeded about a hundred first-line machines, and its heterogeneous nature militated against efficient maintenance.

It will be evident from the above that the Chinese army, in addition to its material difficulties, suffers from a lack of tradition and modern military experience. The resources of man-power, which amount theoretically to at least 20,000,000, are composed of stoical peasants who, well led, could make good soldiers. The "bottle-neck" in this respect is the supply of officers. The low esteem in which the profession of arms was formerly held hindered the provision of men of high character and education, although this situation has improved since national war superseded civil strife.

The administrative services are not yet fully developed. During the Civil Wars the armies lived on the country, moving from one area to another as the local resources became exhausted. Transport was usually impressed, and railway stock was requisitioned without regard to the effect on the transportation service. The low standard of training of the "coolie armies" made it easier for a war lord to enlist fresh soldiers than to spend money on recovering the sick and wounded. During the Burma campaign of 1942 the Chinese Expeditionary Force was fed by the British supply service, while M.T. was also provided from India. The medical organization was furnished by the Chinese Red Cross, assisted by various voluntary bodies from abroad. Such deficiencies are gradually being remedied, but the creation of these services under the prevailing conditions of war is bound to be a slow and difficult process, necessitating large-scale training and considerable imports of material. At present such imports can only be made by air.

It must be remembered that China, like other countries, suffers from the perennial struggle between the enlightened expert and the representative of vested interests. While there are a number of highly qualified technical and administrative officers trained in foreign schools and armies, "Colonel Blimp" also has his counterpart in the Middle Kingdom.

POTENTIALITIES OF CHINESE FORCES IN FUTURE OPERATIONS

As already stated, the Chinese soldier possesses certain valuable qualities, chief among which are his capacity for long marches, high endurance, and a lack of imagination which preserves his morale in circumstances which might tell on the nerves of more sensitive peoples. His standards of discipline, however, differ from

ours; minor offences are often punished more severely, whereas orders are not expected to be carried out as literally as is the case in Western armies. This is due to the extreme individualism which characterizes Chinese thought and action. Upon these qualities have now been superimposed, in the case of certain formations, the benefits of American equipment and training; it will be interesting to observe the effects of this upon the fighting ability of Chinese troops in the forthcoming campaign.

A theory which gained support for many years was that China's lack of war material relegated her forces to a guerrilla role, but this idea has been discredited for the following reasons:—

(a) Guerrilla operations will not of themselves defeat large modern armies. They can only be effective in co-operation with Regular forces by weakening the enemy at the decisive point through harassing his rear areas and forcing him to make detachments.

(b) Guerrillas depend upon the co-operation of the local inhabitants. Guerrilla raids, having no decisive effect but calling down reprisals upon the civil population, thus tend to a constantly diminishing return.

The "Red" or "Communist" armies have proved an embarrassment rather than the help which was expected. It has apparently not been possible to close the breach which occurred in 1928 between Chiang Kai-shek and the Opposition forces; the much publicized Eighth Route Army, which before 1937 was importunate in its demand for war with Japan, has taken no effective part in the struggle and is at present containing a large number of Government troops owing to its refusal to obey the orders of the Generalissimo.

Following their policy in Manchuria, the Japanese have been recruiting Chinese to maintain the authority of the puppet administration which they have set up in occupied territory. These troops are of value only for internal security, could not be relied on to fight against Marshal Chiang's forces, and may confidently be expected to change their allegiance when times appear favourable.

CHINA'S REQUIREMENTS

It is obvious, from what has been said, that China requires large imports of material in order that she may be militarily effective. At present there are only two routes by which such help could be given:—

(a) Soviet Turkestan-Sinkiang-Kansu.

(b) By air across Burma.

In 1937 and 1938 a certain quantity of Russian aircraft and motor vehicles were made available by the first route. Russia's existing pre-occupations, however, and her evident desire not to embroil herself with Japan at present, have for some time closed this door; moreover, the distances involved and the roughness of the road from the Russo-Chinese frontier will prevent it from being an adequate supply route until a great deal of work has been done upon it.

Material is constantly being flown into China by transport aircraft from India, but the quantities that can be so carried are naturally severely limited and can never be adequate under present conditions. The recapture of Burma will open up the sea-land route Rangoon-Lashio-Kunming, but here again considerable work remains to be done before this tenuous line of communication can support a large-scale campaign in China. We should make ready, therefore, for the execution of considerable road and rail programmes in Burma as soon as that country is released from the simian clutches of the common enemy.

MINELAYING FROM AIRCRAFT¹

BY the 13th April, 1944, aircraft of Bomber Command had been laying mines in enemy waters for four years, and since the Spring of 1940 they have probably sunk over a million tons of enemy shipping. More than five hundred ships have either been sunk or damaged.

Four years ago the first magnetic mines were dropped by Hampdens as a reply to Hitler's 'secret weapon'. The reply quickly became a major offensive in which on the average over 10 per cent. of Bomber Command's effort has been engaged. The casualties among aircraft used for minelaying are enormously outweighed by the casualties which the offensive inflicts upon the enemy but the percentage of missing aircraft is little if at all below that of the average rate among bombers attacking industrial cities in Germany. On occasion the weight of mines laid by Bomber Command in a single night has exceeded the weight of bombs dropped by the Germans in any of their heaviest air attacks on this country. Minelaying is often carried out at ranges equal to, if not greater than, those of the bombing offensive against equally well protected areas and in equally rough weather.

In 1940 Hampdens each carried one mine and their first duty was to mine the Great and Little Belts in the Western Baltic, which they did for some months. Before long they had also laid mines in the Kiel Canal. At the present time Lancasters, Halifaxes, Stirlings, and Wellingtons carry multiple loads of mines and lay them from the Spanish frontier in the Bay of Biscay along the entire enemy coast-line to the Gulf of Danzig, 850 miles from their base, and to distant Norwegian waters. Before the surrender of Italy, aircraft of Bomber Command also laid mines in Mediterranean waters.

The offensive has been sustained not only along the enemy's whole coast line, but against every type of enemy shipping. Against U-boats, mines are laid in the approaches to the French West Coast submarine bases and in the U-boat training waters in the Baltic. Against sea-borne military communications between Germany and Russia, and Germany and Norway, mines are also laid in the Baltic, and have made these communications both costly and dangerous to maintain. Other operations are designed to check the import of raw materials from Norway, Sweden and Spain. The coal and iron ore traffic between Germany and Sweden has been seriously interrupted.

This mining has compelled the enemy to maintain a large and widespread fleet of minesweepers. The anti-aircraft defences of his ports have had to be strengthened against minelaying aircraft and many flak ships have been set aside for this purpose. To guard so great a stretch of coastline thousands of highly-trained men and masses of equipment have to be used at a time when he has great need of them elsewhere.

News of enemy ships sunk or damaged by mines is hard to get and there is good reason to believe that for every ship known in this country to have hit a mine there is at least one other whose loss the enemy has kept to himself. Enough comes

¹ The possibilities of minelaying by aircraft to hem an enemy into a harbour or bar him out of it were brought to notice in 1920, as the result of the experience of the North Dvina operations, and it was advocated then that their importance was such as to warrant trials and experiments of an extensive nature both in suitable types of aircraft and of mines.—EDITOR.

through, however, to show what a constant drain these operations are on the enemy's resources. As is well known, mines damaged both the "Scharnhorst" and the "Gneisenau" on their way from Brest to the Baltic in the Winter of 1942. Another "Gneisenau"—the liner of 18,200 tons which was used as a transport for the Russian Front—struck a mine laid by Bomber Command in the Western Baltic and became a total wreck.

The Kiel Canal was blocked for several months by a ship laden with iron ore which struck a mine in the Canal itself.

The troopship "Wuri," laden with equipment for the German Air Force in the North of Norway and with a full complement of Luftwaffe ground crew on board, struck a mine and sank in the Kattegat. This loss of equipment and skilled ground crews must have had a serious effect on the German attacks on our convoys to Russia.

Train ferries in the Baltic carrying military stores and equipment have been sunk and the service has had to be interrupted for long periods.

Some time ago two U-boats were returning from an arduous patrol in the Atlantic. A reception was staged for them, with a band on the pier. Somehow or other the junior captain of the two manœuvred his U-boat in front of that of the senior captain and rushed ahead to get the cream of the reception. Before he reached the quayside, and in full view of the reception committee, the first U-boat struck a mine and was blown to pieces; the senior captain of the two realised how lucky he had been.

The British airborne mine is a long cylinder, not unlike a torpedo without its head and tail; it was, in fact, first designed to fit the torpedo stowage of naval aircraft. It is a ground mine, and when released a parachute at the tail opens and prevents it from striking the sea at a speed which would injure the delicate firing mechanism inside. After the mine has hit the water the parachute becomes detached and the mine sinks to the bottom, where it rests, ready to explode at the approach of any ship. The parachute sinks shortly afterwards and so gives no clue to the whereabouts of the mine.

The firing mechanism may be either magnetic or acoustic. The former is actuated by the magnetic flux of a ship passing over it, the latter by the sounds made by a ship, the noise of the engines, pumps or propellers. Unlike a moored mine, which generally detonates on the side of a ship, the ground mine detonates under the bottom of the ship, often breaking the back and so causing fatal damage. The average weight of the British mine is 1,500 lbs., seven or eight hundred pounds of which is a powerful explosive filling.

Minelaying operations are an example of very close co-operation between the Navy and the R.A.F. The Director of the Minelaying Operations Division at the Admiralty issues a broad directive to the Naval Staff at Bomber Command—a Captain R.N. and a few assistants. There is a naval assistant at each of the Bomber Groups which carries out minelaying. The Scientific and Supply Departments of the Admiralty design new types of mines and arrange for the supply of mines to the many bomber stations engaged in these operations. The Naval Staff Officer at Bomber Command Headquarters is in close touch with the C-in-C. Bomber Command, and keeps him informed of the Admiralty's wishes. In conjunction with the Air Staff of the Headquarters, the Naval Staff Officer plans minelaying operations and obtains available aircraft from the C-in-C. The Naval Staff Officers at Groups

get their orders every day from Command and arrange for the mining up of aircraft, the briefing of the crews, and all the detailed work which can only be done on the spot. When they return from minelaying, the crews are closely interrogated about whether they have laid their mines in the right place and whether they have been successful or not. All the information they give is passed back to Command and to the Admiralty, where it is sifted and put on record.

The present C.-in-C. of Bomber Command was in command of the group of Hampdens which first laid mines in 1940, and before the War he was one of the earliest enthusiasts for the idea of laying mines from the air, and has since always encouraged development of aircraft mines. He now has the job of directing the biggest minelaying offensive yet known, as well as of planning the R.A.F.'s strategic bombing of Germany.

SUBMARINE WARFARE

By COMMANDER B. BRYANT, D.S.O., D.S.C., R.N.

On Wednesday, 2nd February, 1944, at 3 p.m.

REAR-ADMIRAL C. B. BARRY, D.S.O., in the Chair.

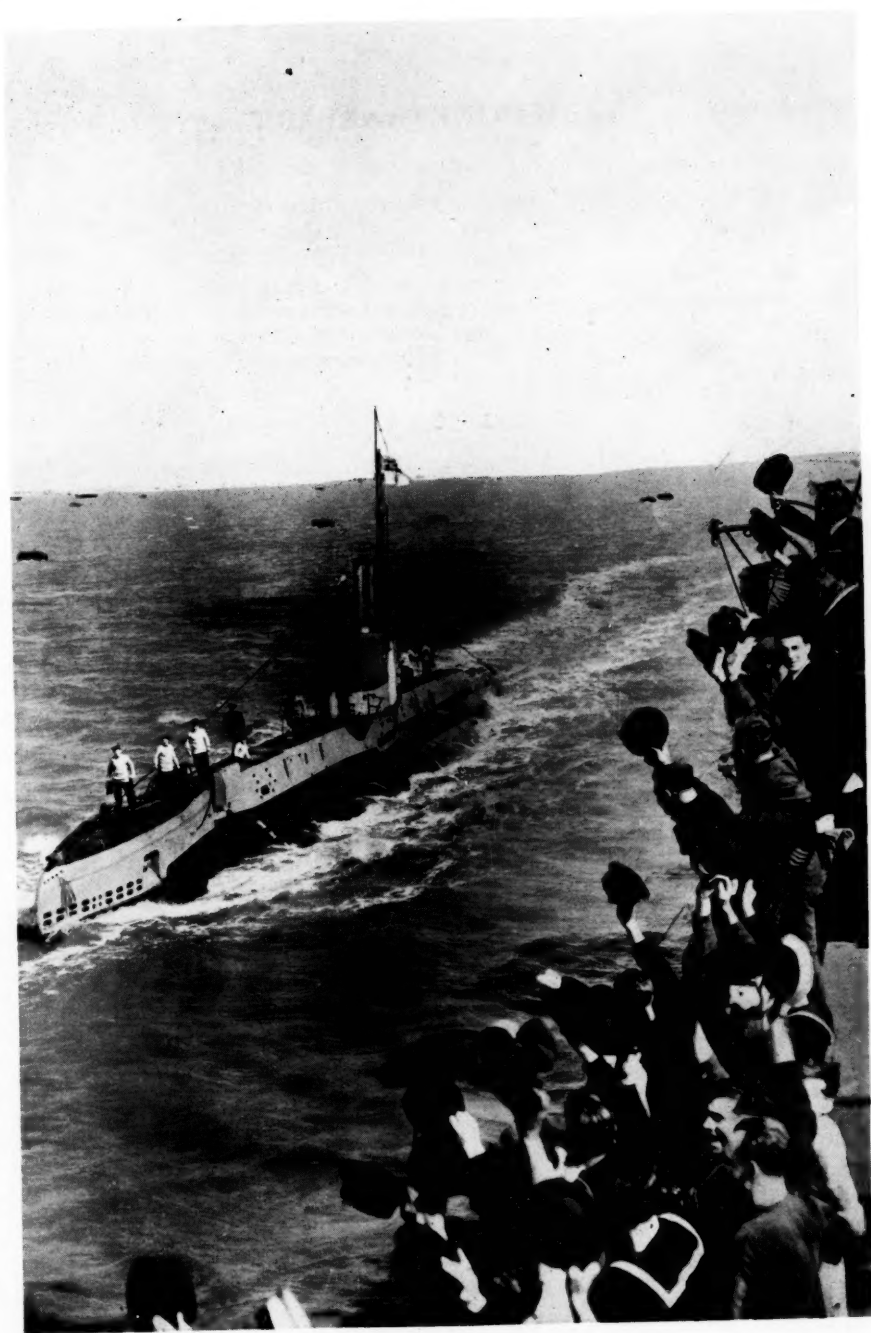
THE CHAIRMAN, on introducing the Lecturer, said that Commander Bryant had a most outstanding record in command of H.M. submarine "Safari," which was indeed a thorn in the side of our enemies in the Mediterranean. He was now in charge of the training and of working up of the crews of all new submarines, and there was no one better fitted to do that or to talk about submarines.

LECTURE

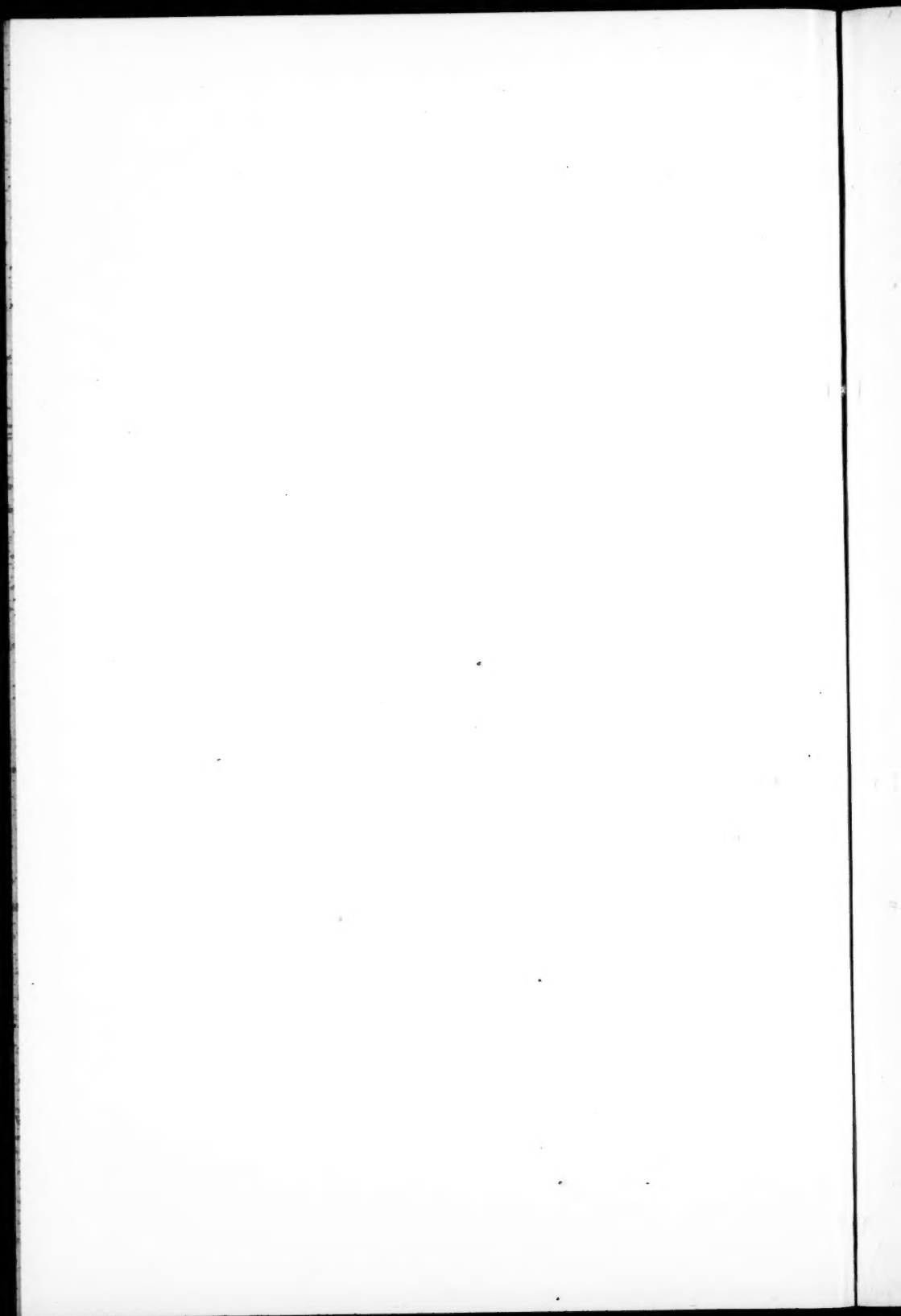
IN the early days of submarines the French pioneers divided them into two types—the "submarine" and the "submersible." The former was the small, handy boat with poor surface performance, and the latter was the big boat that sacrificed tactical qualities as a torpedo boat to give surface performance and range. The French are always logical and although the term "submersible" soon dropped out, the principle remains. I, however, would prefer to divide the submarine into three types—the "small" which sacrifices range and hitting power for tactical qualities; the "medium" which gives reasonable range and hitting power without too great a sacrifice of manoeuvrability; and the "large" which sacrifices tactical qualities to get endurance. It is essential to realize that there are these different types of submarine before one can understand their functions, their possibilities—which are immense, and their limitations—which are many.

THE SMALL SUBMARINE

First comes the "small" submarine—up to say about 500 tons. Here everything—range, habitability, hitting power, speed, is sacrificed to tactical manoeuvrability and simplicity. So it is easy to handle, suitable for training, and easy to produce. The extreme example of the small submarine is the "midget." Reading the daily papers one might imagine that the midget is a new conception, but in reality it is the oldest operational type. It may be said to have originated in the American "Bushnell" of the War of Independence which was designed to enable unpleasant things to be done to the bottoms of warships in harbour with the assistance of a brace and bit. Since then, however, the *modus operandi* has advanced considerably and both sides have achieved some success with the "midget" submarine during the present war. The size has however to be kept so small to avoid detection when passing the enemy fixed defences that the range is extremely limited, and I do not see much future for this type, except in occasional operations specially conceived and relying on surprise, e.g., the attacks on Pearl Harbour and our own attack on the "Tirpitz." Such operations may change the whole strategical situation. At any rate, the threat of attack by the "midget" tends to cause much expenditure of effort upon fixed defences. Where the enemy has been forced to improvise a base—as in an amphibious operation—the "midget" has possibilities, but the difficulty is to organize an attack before he has improved his defences or moved on. For example the Italians—who rather specialize in this class of submarining—took remarkably



SUBMARINE WARFARE
RETURN FROM A SUCCESSFUL PATROL



little advantage of the opportunities presented at Algiers during the North African landings, although they did sink or damage a few merchant ships. They also had limited success at Gibraltar, particularly in the merchant ship anchorage, where they were helped by territorial waters in the "get away." The "get away" is one of the main problems in these operations, for there is a limit to the number of brave men who can be sent out with little chance of return. Another factor is the very high standard of physical endurance demanded by some of these little craft.

The more ordinary type of small submarine is the one up to about 500 tons, exemplified by the German 250 tonner—considerably more by our reckoning—and by our own American designed H boats and the R boats of the last war. These are splendid handy little boats. The Germans called their 250 tonners North Sea Ducks and they had some success early in the War. However, under modern conditions, the North Sea is an unhealthy place for submarining—the water is too shallow and there are far too many mines, and the German submarine effort seems to have been driven too far from our coasts for their use. The 250 tonner has been relegated to training and possibly it may be used in the Black Sea and Baltic. Our own H boats are too old and lacking in sea-keeping qualities to have played much part in this war. Nevertheless I think everyone who has commanded one has an admiration for their qualities. Before the War if in a fleet exercise Lieutenant Jones in his first command in an H boat brought off a successful attack against the battle fleet, while experienced Lieutenant-Commander Smith in a large new boat got completely foxed by the screen, during the post-mortem over a glass of gin you would always hear such remarks as "Anyone can attack in an H boat"; yet Smith would have felt insulted if it was suggested that this proved an H boat was a better submarine than his monster. I maintain, however, that tactically this was in effect true.

One of the limitations of the majority of submarine torpedo attacks is that you have to use the whole submarine as the tube. The basic attack is swinging the submarine so that it points in the right direction, and some targets are as fast as a game bird. In all modern submarines the heaviest torpedo armament is in the bow, and since in most cases one is running in on the enemy, that is the best place to have it.

The thing which gives away the submarine more than anything else, whether in submerged day or surface night attack, is wake. This is a product of power in the propellers and lines of the hull. The slower you go the less the wake, until finally propeller noise and disturbance fall below the residual detectable noise of the machinery which in a modern submarine is extremely silent. A submerged submarine cannot be swung about quickly like a surface ship; her speed is cut down to a maximum of about two knots to avoid detection, and therefore a considerable time must be allowed to turn her on to her firing course. Thus the enemy's actions must, whenever possible, be anticipated, which calls for most accurate timing and careful judgment on the part of the Commanding Officer. So manoeuvrability is of paramount importance in order to help him in his difficult task.

Many attempts have been made to overcome this disadvantage. The French and Dutch have had training tubes external to the pressure hull. There are many drawbacks to this—difficulty of concentrating all the tubes on the required bearing, topweight, noise and back lash in the training, extra holes and therefore weakening of the pressure hull—and, what also applies to all tubes fixed or training external to the pressure hull, difficulty in getting at the torpedoes for servicing or adjustment

of depth setting. Altogether, I think training tubes are generally discountenanced. Another approach to the problem is to angle the torpedo, that is to let it complete the turn before settling on its running course. This produces complication of torpedo control, and also asks a lot of the internal mechanism. The torpedo already has a good deal to do to run at set depth and speed and course, and the less you ask of it the more likely you are to get satisfaction. The German U boat has a comprehensive angling system, but I do not know to what extent it is used, although it appears that the German E boats (motor torpedo boats) do not angle. Their torpedoes certainly have a very good gyro; on the other hand, we found in a captured German submarine that the greatest attention has been paid to manoeuvrability, and aided by twin rudders—despite the production complication they involve—she handles extremely well. Incidentally, a German 500 tonner is about 730 tons by our reckoning, and the equivalent to our S boats; she has much the same turning circle despite her finer lines.

The main trouble about the small submarine is that its very limited sea keeping qualities make it so hard for the staff to operate.

THE MEDIUM SUBMARINE

The next type of submarine comprises the most successful boats of this and the last war—the medium submarine of about 550 to 800 tons. From 1917 onwards the Germans, having created a furore with the pioneer large boats such as the "Deutschland" which raided the American coast, realised that they were uneconomical and concentrated on U boats much the same size as our E class submarines of those days. As was to be expected, the main plank of the German submarine programme in this war has been the 500 tonner, which, as I have said, is the equivalent to about 730 of our tons—the logical descendent of the most successful submarine of the last war. The Italians also realized the advantages of this type and their post-1939 submarine construction seems to have concentrated on their "Metal" class—somewhat similar in size and appearance to the German 500 tonner.

We ourselves have the U and S classes, which have given excellent service. The U class, which became the mainstay of the Mediterranean submarine war, owe their existence to a lucky chance. They escaped the "staff requirement" bugbear, which seems to demand a cross between a submersible hotel and a tanker, and which can be very conveniently moved around as a flag on ocean charts in the staff office, but which is by no means so easy or convenient to move around in action by the submariner. But the U class was designed to meet the staff requirement for training, so the submariner happened to get a handy boat with excellent tactical qualities which were made good use of in the Mediterranean where their slow surface speed did not matter too much.

The S class are a bit larger than the U's. We had a dozen at the beginning of the War, and they held the front line in the grim days of the Norwegian campaign with corresponding losses. They were revived in time to take part in the last year of the North African campaign and proved themselves excellent boats.

It would appear that between 550 and 750 tons you can add considerable armament to a submarine and increase its speed without too adverse an effect upon its tactical manoeuvrability. For an extra 150 tons the S class has two or three more tubes and 25 per cent. more speed and better sea worthiness; also it mounts a much better gun armament. As a plain torpedo boat it is of course inferior, but the extra torpedo armament largely discounts this.

THE LARGE SUBMARINE

The last type, which you may have gathered I personally consider should be avoided if the strategical situation possibly permits, is the large submarine. I put the limit at about 800 tons upwards, and at the lower end of the scale it can be quite a handy boat. Here we find the German 740 tonner—probably between 1,000 and 1,100 of our tons and comparable to our T boats, which have given such excellent service, even sometimes in hot spots. We also had a variety of bigger and older boats at the beginning of the War, which except as minelayers and despite the magnificent performance of their personnel have not proved an economical weapon up to date, except that as cargo carriers to beleaguered Malta they did valuable service. For the Pacific war—involving vast distances under trying climatical conditions, something larger than the medium submarine is essential for some areas.

The fact remains, however, that if you make the submarine so large that it has the endurance to get at the enemy at vast distances, it is not going to be much good at the job when it gets there—that is if the job involves much opposition.

A point which affects submarines of all types is production. Submarine losses—on which I will touch later—are bound to be fairly high, not because there is anything basically dangerous in them, but merely because they spend so much of their time in action in waters where the enemy has complete surface and air control. Also, since their submerged speed is bound to be slow¹ and their surface speed limited by the space which can be afforded to engines and fuel, a number of submarines are required to cover an area effectively. It follows, therefore, that in order to provide the requisite numbers, submarines must be mass produced. The bigger submarine, of course, uses up more raw material, but it may not be more difficult to produce in quantity than the smaller type: there are a certain number of machines which must go into any submarine, and not only is it harder to fit them in, but you cannot employ so many workmen in a small boat; thus if the temptation to fill the large boat with a lot of fancy gadgets is avoided and they are kept down to spartan simplicity, it may be quite economical to produce.

I said just now that the speed of the submarine on the surface was limited by the space available for the engines; but in the presence of the enemy there is another limitation, more particularly at night, and that is—as I have mentioned before—its effect on the wake, in which I include bow wave. Before the War, in a flotilla which included three of our River boats—20 knot monsters, we found how their wake gave them away at night when steaming on the surface. Wake is admittedly a fetish of mine. In the Tyrrhenian Sea and Sicilian Channel where aircraft were much in evidence in 1942-43, I always tried to go at a speed which made the minimum wake at night, and when we heard or saw an aircraft the Officer of the Watch just rang down "Slow." Just after Christmas, 1942, we were off Zuara, near Tripoli. It was very aggravating that, although we were sweating blood over the festive season, the Italian with all his merchant shipping seemed to be taking a holiday. Having been off on a wild goose chase, I returned at dusk to my selected inshore billet in time to see a very large fat schooner go by before I could get at it. I was so angry that, as soon as it was dark, I came up and chased it along the coast

¹It may not be generally realized that 2-3 knots is the ordinary submerged cruising speed at which a submarine can continue for a day or two, whereas at her full submerged speed of say 8 to 10 knots she can only last for an hour or two without replenishing her stored power.

to the Eastward. Now a submarine which relies on always seeing the other man first is at a disadvantage inshore at night, since the landward horizon is black and you cannot see an enemy silhouetted against the dark background, particularly E boats, which were the bane of our existence. Accordingly you should keep off shore at night, particularly in these days of Radar. However, I did not do so, and furthermore had not had time to charge the battery. As I deserved for such rank had submarining, we were detected by aircraft operating with the E boats. A short time before we had bumped off a petrol schooner nearby and the enemy was showing rather more efficiency than usual. The situation was a bit awkward: the moon was due to rise in about three hours; we were close in shore; and we had to get in a "charge" if we were to operate next day. To dive would have meant using up the battery still more, and in any case it was obvious that there would be a hunt next day. The bottom was silver sand, so that a submerged submarine would show up well. The only thing to do was to remain up and to edge away slowly making no wake. So there we were with the aircraft circling so close that we could see their exhausts, and yet they could not see us, because we were making no wake, and by moon rise we had made a comfortable get away.

Even by day your wake gives you away. A submarine on the surface is very hard to see, especially at night or in low visibility. At the start of the North African landings the "Safari" was on a patrol line off St. Vito—N.W. corner of Sicily, when "P 46," also on our patrol line but a bit closer in shore, winged a cruiser. We received an emergency signal to the effect that the damaged cruiser in tow of tugs with some seven escorting destroyers and a selection of E boats and aircraft was proceeding to Palermo. We were ordered to intercept at maximum speed "forthwith." When it was dusk we bobbed up and after two hours at full speed ran across a destroyer at about 10 p.m. There is high land to the West of Gallo, and it was a dark night and we had made contact on the outer screen from to seaward. We could see little inshore, but it was clear to seaward and we had to work through the screen to get inshore so that we could get the enemy silhouetted against the light horizon. From 10 p.m. to 1 a.m. we were amongst that party, diving occasionally as a destroyer came out of the land at us, bobbing up as soon as she had passed. With speed cut down to 8 knots to avoid wake, we spent five hours looking for that cruiser. There was always one, usually two, frequently three destroyers in sight, often with the light against us and the enemy weaving madly about. Yet we were never seen. It is true that we never found the cruiser; at 1 a.m., having at last worked in shore of the party, I found that she had got round Gallo and we were left with only two destroyers, who were sniffing round in such an unpleasant manner that we were happy to call it a day.

I have digressed rather a lot, but the point I wanted to illustrate was that in certain tactical conditions, for surface work the fastest submarine may be reduced below the speed of the slowest if the latter has cleaner lines and makes less wake; therefore, if there are a lot of aircraft about, a number of slow submarines are much better than a few fast ones.

ARMAMENT

Having decided upon the type of submarine, the next thing is the armament. Any type—except the smallest which is basically a torpedo boat, even down to being part of the torpedo itself—can be primarily a torpedo boat, a gunboat or a mine-

layer. The primary armament of all modern submarines is the torpedo and, as submarine mines can be laid from torpedo tubes, any submarine can also be used as a minelayer. Yet it is the small craft of the Axis which carry their most vital war supplies: the schooners in the Mediterranean were frequently loaded with ammunition or petrol, and, furthermore, they could carry it close up to the front line where—as is so common nowadays—the fighting is near the coast, and where there is no proper port. A couple of hundred tons of petrol delivered to the front line at the crucial moment may be vital in an armoured battle, whereas ten thousand tons at a distant base may have no immediate effect. Accordingly it is essential to destroy these enemy small craft, and this is where the submarine gunboat comes in.

Our own submarines in this war, whilst they have had lots of opportunities for gun action, have been terribly handicapped by their gun armament. For political reasons, founded on a pious hope that the enemy would follow suit and neglect to use the best all round commerce raider war has yet produced, up to 1940 we were only supposed to think of submarines as destroyers of warships and more particularly battleships. Now battleships, though it may be the ambition of every submariner to sink one, do not go to sea every day (particularly the Axis ones), whereas supply ships do. So supply ships—which in any case the battleships merely exist to defend or destroy—are the bread and butter of a submarine. If you can bump off the defending warships so as to give your own surface craft—and surface craft can clean up a convoy very much better than a submarine—a clear run, well and good; but the ordinary task of the submarine is—and I maintain always must be—the destruction of enemy supplies. It is that which I have constantly in mind throughout this lecture. For a submarine there is no difference between a torpedo attack on a supply ship and one on a warship, except that you probably know the latter's mast-head height and revs. per knot of speed—which makes her easier, and the fact that she is probably going faster—which makes her harder to hit. With the exception of minor warships, submarines do not attack them with guns; and this particularly applies to attacks on battleships. They may do so some day, and destroyers on both sides have been shot up by submarines, but not I think generally from choice. Accordingly the design of submarine gun armament fell back from 1918, when we had the present 4 in.—which, although not designed as such, is quite a good submarine gun. The majority of submarines in the Mediterranean between 1942 and 1943 were armed with a 3 in. Army A.A. gun, designed, I believe, for the defence of London in 1915. It had an objection to water, and in the years before the War filled submariners with gloom. The T. class armed with the 4 in. gun showed what one could do with a real gun. However they were handicapped by their size in the restricted Mediterranean sea. Actually the much abused 3 in. gun was not such a handicap as we feared it would be. A submarine has such enormous advantages in gun action that it can afford to give away a lot of weight and still come out a winner. (My breech worker enjoyed flogging the breech with the lead mallet, which was an essential instrument in the drill, and I suspect the wretched gun got a lot of unmerited blows.) The submarine can choose range, light and weather gauge, and achieve surprise—the first round may be got off within half a minute of breaking surface—and she can break off the action at will. (In action my submarine surfaced, put 20 rounds into the target—a 600 ton steamer, and got down again in three minutes from start to finish.) Also submarines are singularly invulnerable to gunfire, nearly all their vitals, even when on the surface, being below water; while the conning tower is a small target and not vital at that.

The best performance with a gun in this war was, I think, that of the "Sahib." Armed with a 3 in. she attacked a 1,500 ton Italian ship carrying troops at night. She knocked out one of the two 4.7 in. guns of the enemy and crippled her engines before he knew what was hitting him; the other 4.7 in. got off its first round—on the disengaged side incidentally—just before a torpedo sent the stopped target to the bottom.

Of course if the enemy can put up close air cover for every small ship and barge—a prodigious task—he can combat the submarine gunboat. It has to keep close, too: one day off Sardinia we met a schooner with a flying boat escort; but the escort flew round a point of land for a look ahead and we had time to bob up and bump off the schooner—it was full of ammunition and blew up in a most satisfactory way, leaving nothing but a stain on the water before the "Cant" flew back, only to find not a trace, and no amount of circling could explain it.

I personally believe that a medium size submarine armed with two 4 in. guns and an armoured bridge with Oerlikons is the answer to barge traffic. The only trouble is that a gunboat needs a higher standard of training than a torpedo boat, but the sailors evince such enthusiasm at shooting things up that I think this difficulty can be overcome. That armament can also stop medium-size merchant ships, a single well-placed torpedo finally sinking her. Also there is no need to stay down and get a headache from A/S trawlers and the like if you can shoot them up. The Germans have tried to put such an A.A. armament into their U boats that they can fight off aircraft; they have not been successful, thanks to the determination of our airmen, but they have thereby stepped up to a very great extent the air effort required to destroy them.

THE INFLUENCE OF AIRCRAFT

I think that if you are able to put up enough air effort you can always drive the submarine from the field. We experienced that off Norway in the summer of 1940 when there was no night, and modern detecting devices have now penetrated what used to be the submarine's sure shield—darkness. A submarine must have peace at some time to charge her batteries and replenish her air—breathing and compressed. If you deny her that peace she cannot operate. Given that peace between operating hours, I do not believe there is as yet an ocean-going screen which a well handled small or medium submarine cannot penetrate. The "get away" after the attack is more difficult and depends largely upon sea conditions, and the submariner knows a lot about those—that is his business. But the effort to put up even an unopposed A/S air offensive—particularly away from bases—is prodigious and, win or lose, the submarine remains a very economical weapon.

I said that a submarine can penetrate any screen, but, owing to her low operating speed, the difficulty is to get into a position to do so. It is by hounding her morning, noon, and night that you prevent her reaching that position. Near air bases, given the requisite air superiority, the aircraft is better at destroying shipping than the submarine. Until the end of the North African campaign submarines took a heavier toll of Axis shipping than our air forces did, particularly around Malta; but with the establishment of air bases in Central North Africa, the latter—particularly the day bombers—came into their own, and our submarines were happy to move farther afield. Where the enemy is protected by mines and shallow water, aircraft and the motor torpedo and gunboat are far more effective than the submarine. The submarine likes some support, particularly fighters to shoot down the enemy A/S aircraft; but she is perfectly willing to fight it out unsupported

in a way that no other arm can. Submarines operating unsupported, and usually in waters completely under enemy control, sank three quarters of a million tons of supplies destined for enemy North African forces alone. They paid a price: a large number were lost, mostly with all their crews; but I believe history will show that the sacrifice made our victory possible. Looked at in a cold-blooded way, and remembering that in addition to ships (which included a battleship, half-a-dozen cruisers and a score of destroyers and submarines sunk or damaged) and supplies and the effort which the enemy had to make to combat them, probably more than 20,000 Axis men were accounted for by our submarines, and that, I think you will agree, was a very good dividend. Our high losses were brought about by the restricted waters in which we had to work, and they were infinitely greater than would be the case in other theatres. Remember that, whereas the Battle of the Atlantic is fought hundreds of miles from our coast, our submarines in the Mediterranean often operated only a few hundred yards from that of the enemy.

Nevertheless, we had one big advantage in fighting in a restricted area, and that was that the enemy was comparatively easy to find. It is getting your submarine to the right place that is always the trouble. Air reconnaissance can help, but when used by the other side it keeps the submarine down so that her field of view is poor. It is much easier to get your large fast submarine to the right place, since it has the necessary endurance. In the Gulf of Sirte I have been close in, harassing the enemy's supplies and watching his soldiers through the periscope. Everyone is too busy to make a major effort against the submarine. The "Parthian" in the Syrian campaign sank an enemy submarine which was annoying the bombarding surface ships by attacking them under the protection of shore artillery, in full sight of the French troops on the beach. The "Turbulent" even knocked out Rommel's lorries on the beach. I remember laughing whilst watching the Huns scurrying away over the sand dunes when we pushed a torpedo into his lighters at Ras Ali pier. There is a lot of scope in this work. In practice we were not very successful against the German Tank Landing Craft because they carried much better armament than we did; but that could be overcome.

Submarines can also be used strategically, on a long term policy, far from their home bases, for attacking an enemy on the high seas with long distance boats. They may not achieve decisive results, but they will compel him to make a disproportionate effort to combat them. The German submarine offensive off the American coast was a good example of that policy as applied against us. I do not think we can expect the submarine weapon to be decisive in itself, but it can wear down the enemy so that other arms can be decisive, and an excessive effort is always necessary to cope with even a weak submarine force.

As regards the weapons a submarine uses, I am restricted in what I can say by secrecy regulations, but in fact they have changed surprisingly little. In 1943 my submarine in the Mediterranean competed quite happily with exactly the same armament and exactly the same tactics as I had in 1939—and these tactics were almost entirely based upon the lessons of the 1914-18 war. Personally I should have been even happier with the armament of the corresponding 1918 submarine because it had better gun power. Defensively, of course, the 1943 submarine was infinitely superior. Apart from an armoured bridge and gun shield a submarine's armour is water, and usually the more you have over you, and under you, the better as regards enemy action. I put in the last qualification because the dangers of the sea have to be considered nearly as much as the violence of the enemy. As the

sea is unaffected by the size of a submarine or by mechanical genius, her defence consists chiefly in using more of it. On her side the torpedo has by no means reached finality and may yet counter the improvements in A/S warfare. Altogether, as far as I can see, the submarine remains the most economical commerce raider in warfare, and where the enemy A/S forces are overpowering she can still lay mines in a peculiarly effective manner.

ANTI-SUBMARINE MEASURES

Now what are the counters of the submarine to anti-submarine warfare? I have touched on the air as an A/S weapon: the counter to it is a good look-out and to operate so far from air bases that the enemy cannot maintain constant air cover. Of course, if available, your own fighters can help. In the Mediterranean, in 1942-43, enemy air attack never worried me, although a searchlight Wellington once surprised us off Algiers and made me think a bit. Given a clear sky in daylight a submarine should always see an aircraft in plenty of time to dive before she is spotted. Cloud cover makes things more difficult. The chances of an aircraft seeing a well-handled submarine submerged are negligible.

Lastly, but not necessarily least, comes the surface A/S craft. I started the War with a supreme contempt for the Asdic (I had spent much time exercising with it), and since the enemy never seemed to get (in my time) much better at it than we were at the beginning of the War, I never had anything much to worry about. Possibly I was living in a fool's paradise, for it would appear that the Asdic, judging from results on U boats, was far better than I thought it. On the other hand our A/S methods have improved out of all knowledge and I think now cause the Hun plenty of trouble.

Somehow one can tell if the chap who is being noisy up top is any good, just as when one was a kid and being beaten one considered the skill of the manipulator of the cane. I have a photograph of an Italian "Orsa" class destroyer who thought he was hunting us. Taken at 2,000 yards through the periscope, we tried to get him dropping a depth charge. However, I feel that he would have felt a bit hurt if he realized he was being photographed. (He was too shallow draft to torpedo, as most of their A/S craft were.) I remember, too, one morning when we were after a small steamship with one escort. She avoided the attack by going through the breakwater just before we could fire; but we got her just 24 hours later after she had picked up some cargo. The escort stayed outside idling about and, looking at her through the periscope, I was considering whether she was worth attention (as I knew that she was definitely the Third Eleven), when during her aimless wanderings, she came past us very close. It was the Christmas season and there was only one man on deck, the O.O.W. I suppose; and he was resting his burning forehead on his arms folded across the bridge rails.

Of course one can make mistakes, and sometimes you meet a First Eleven which you do not recognize in time. I remember one moonlight dawn in the Tyrrhenian sea meeting a destroyer—a large, deep draught one on a steady course at 15 knots. She seemed ripe for the bag; but I was careless—too much periscope, or a bit too much speed on the outer screw as we turned, and suddenly I found she had detected us and was coming straight for us. We had barely time to take evasive action before she put down a very well executed pattern of charges which shook us up quite a bit.

Lieutenant McGeoch in the "Splendid" was an expert at summing up the enemy. Once off Naples he had only one salvo left and he knew all our submarines were busy, when an Italian submarine came ambling along on the surface. In his report he stated that as she was not zig-zagging, he could see the C.O. was inefficient, whilst her mechanical inefficiency was indicated by the amount of smoke she was making; therefore, she was not worth shooting at. He found good use for his torpedoes shortly after. Another time he found a merchant ship off the Sardinian Coast with an A/S trawler and A/S schooner escort. Summing up that they were the Third Eleven, he surfaced and sank the trawler—which had at least as good a gun as he had, and then the A/S schooner by gunfire;—after which he torpedoed and sank the merchant ship, which had conveniently stopped to abandon ship. Danger comes when a submarine commander has such supreme contempt for the enemy that he gets careless—he cannot afford that, and a small fright occasionally is a good thing.

PERSONNEL.

As regards manning, given young and keen men, it is not hard to make a submarine crew; but, of course, skilled ratings cannot be turned out in a short time, and a submarine has to have a high proportion of skilled ratings. Compared to a surface ship the crew is small. An O.O.W. and two look-outs is an average for the men on the bridge. Everyone is in three watches, except the Captain and Engineer. In most submarines the men keep one or two hour tricks. The main time for sleep when you are on diving patrol is in the forenoon, but any time off watch is sleeping time. Once they get used to the life, the men are happy and most would not change. Provided one can do without exercise it is quite a healthy life and, except possibly in the tropics, there is little sickness. My own opinion is that there is a tendency to underrate the endurance of the human body, which is the same basically, if softened by civilisation, as it was in Nelson's day, while the care and maintenance it gets now is far better. Living conditions in a submarine are far superior to those in lots of slums, and it is surprising how happy you are when you are really dirty. Men will stand any amount of discomfort at sea provided they can get comfort in harbour.

OPERATING SUBMARINES

As regards operating submarines, I have left this to the last as I know little about it. All the true submariner asks is to be given a fruitful area and left alone to sink ships in it. On occasions when other operations are under way, he has to be controlled from the base; this the submariner hates, but realises that it is necessary. You see operating conditions affect the submariner so closely—a light breeze and popple on the water may make an attack child's play; a glassy calm may make a Fifth Eleven screen dangerous; a passing shower can blot out a target at the critical moment: twice have I lost tankers because they disappeared into squalls; in one case another of our submarines, the "Snapper," was robbed of the same tanker by a similar squall a few hours earlier. Even the state of the Captain's liver comes into it: if he is feeling off colour he does well to wait in the deep field for the enemy to come to him; when he is feeling on top of the world with every reaction on the top line, then is the time to go in and bring off his coup. The submariner studies every detail of the coast—things which no chart or air photograph can show; every sounding; the sea breaking on rock or shingle to drown his propeller noise; a light patch of cliff to show up the enemy, which would be hard to see a few cables farther along. The movements of enemy mine sweepers and patrols

tell him where he is safe from mines and where the game tracks are. A fold in the hills or a white cottage to act as navigational land marks; that inconspicuous little hut on the shore which may control a loop; the routine air patrols; the radar stations; the shore batteries—these and many other things he notes. When he is stationed on a patrol line he is like a dry fly fisherman detailed to sit in a row on the canal bank and watch a float: he may catch better fish, but he will long to have the freedom of the river; to plan his campaign for a particular trout; to choose the casting position that suits the wind, the current, and his own limitations; to make the careful stalk—the rise and strike. That is how it is with a submarine attack, and the equivalent to getting the fish in the net is seeing the victim sink.

I do not suggest, of course, that all submarines should be left uncontrolled with roving commissions; but frequently this is the best plan, and it is one that has paid the highest dividends.

In conclusion, I think there is one point that is not generally realized. His Majesty's submarines *never count the odds*. In this I think they share that honour alone with the fighter aircraft. But there is this difference, the submarine has to wait and take the hammering afterwards. I think it is sufficient advertisement for a weapon which wishful thinkers pronounced obsolete a quarter of a century ago, that after four years of modern warfare the submarine can afford cheerfully to adopt these tactics and make such handsome returns.

So when, after this war, the U boat menace has been conquered by the imponderable force of our A/S efforts, before writing off the submarine as obsolete, it would be wise for the critics to weigh the cost against the enemy's expenditure.

THE CHAIRMAN

I would like to sum up this really excellent lecture we have all been listening to by saying something to you about the history of the British Submarine Branch during these last two wars and the intervening peace.

In the last war—which was, of course, a much more static war than this—the Germans had practically no sea lines of communication whatsoever. Therefore our submarines, although they got their opportunities occasionally—such as during their patrols in the Dardenelles which were spectacular, generally speaking had comparatively few opportunities in that war. So, when it came to an end, the great value of the submarine to the British Empire was not altogether realized. Then came peace with its reductions and the League of Nations, which said that the submarine was a barbaric weapon. Britain, as an ardent supporter of the League and well knowing that the submarine was a very dangerous weapon against us, supported this point of view, with the result that our submarines were allowed to dwindle into a lamentably small number.

Then came this war—so different from the last. Our enemies were operating overseas and depending entirely on their sea lines of communication, both in Norway and in the Mediterranean, so that gave our submarines their great opportunity, and they seized it with both hands. As Commander Bryant told you, conditions in the Mediterranean were the most difficult that have ever been experienced by submarines. We had, however, a number of fellows of his calibre who were not deterred, and produced the results of which you all know. (Applause.)

Now we shall shortly be faced with the task of finishing off Japan, and there is the real opportunity for the submarine. Japan with a far-flung, quickly-gained empire, depends entirely on her sea communications, and the submarine has this invaluable attribute of being able to go out and operate against the enemy at great distances unsupported.

We are now starting to build up our submarine strength in the East. That will go on, and I foresee our submarines there, in conjunction with our friends the Americans, playing an ever-increasing part in the defeat of the Japanese.

It is interesting to trace how the submarine, from small beginnings, has now become the spear head of the fleet, and it has been done in a remarkably economical way, especially in regard to personnel. I think, honestly, the submarine branch of the Royal Navy is now the finest example of economy of force, for it has achieved success far out of proportion to its numbers.

The customary votes of thanks to the Lecturer and Chairman were carried by acclamation.

THE DISARMAMENT OF THE AGGRESSOR

By COLONEL L. GURNEY

DURING the years before the War, the majority of our armament difficulties were the direct result of a programme which was designed to produce the essential minimum of preparedness for a defensive war. The governing factor, all the time, was the consideration of how far need we go rather than how far can we go in the time available. Thus these difficulties were self-imposed, but there seems to be no reason why, now that we have learned what they are, they should not be deliberately forced upon aggressor nations. The purpose, therefore, of this article is in no way intended to bring to light any shortcomings in our own programme but to investigate its inherent problems with the hope of drawing certain conclusions which may assist in obtaining a formula for the perpetual disarmament of Germany. How these problems arose can best be illustrated by outlining what, for want of a better expression, may be termed the arithmetic of armaments.

In building up this arithmetic it is first necessary to formulate, step by step, the requirements of a non-aggressor State faced with inevitable war at some future date unknown. Quite obviously, first line equipment for the units is the primary need; and let us say that a hypothetical but reasonable figure for one particular item is 30,000. Having placed orders for these, the next point to be considered is the wastage or replacement rate, which will depend partly upon the durability of the article itself and partly upon its own particular war risk. Assessing this at 10 per cent. per month, it will be seen that an income of 3,000 per month will be required as soon as hostilities begin. Before, however, going more deeply into this question of damaged, destroyed or worn out material, there is still the question of reserves.

In the first place, first line equipment must be supported by reserves readily available in the actual theatre of operations, their numerical quantity depending on the length of the sea or land line of communication and on the liability of this line to interruption by enemy action. If these are assessed at two months income, then the total capital requirement rises by another 6,000 to 36,000. Suppose now that this capital has taken three years to accrue, then the average rate of production works out at only 1,000 per month. Thus even though the aggressor has allowed three years warning, the non-aggressor is only one-third ready for war, since his maintenance needs must be supplied at a monthly rate of 3,000. Hence the first conclusion: that rate of production is of equal importance to the actual accumulation of stocks.

In other words, the effort has not been sufficiently great and if this effort, for one reason or another, cannot be increased during peace, then the only alternative is to rely on the magnitude of post-mobilization production. In this case, additional reserves become essential for tiding over the early months until war-time manufacture has really got into its stride, and the problem resolves itself at once into a vicious circle. The number of months required for each item to reach production at the required rate is normally known as the "war production lag."

Considering rate of production in more detail, the factors are purely and simply those confronting any business organization, *i.e.*, the availability of factories and plant, skilled labour, raw materials, components (*e.g.*, guns and ammunition for

tanks) and last but not least, jigs, tools and gauges. Combining all these factors under the term "war potential" and going back to the other term "war production lag," it becomes apparent that the two are vitally interrelated. The latter may be and often is grossly under-estimated when the production potential is not available, wholly or in part, at the moment required. For example, given the necessary potential for 100 tanks, manufacture might be completed in six months but, if the task also includes collecting and building up the potential, then deliveries may take anything from eighteen months to two years. Or again, the production lag for 50 tanks per month might be six months, while the lag for double that number might be four times as long.

It is now possible to draw several very definite conclusions, but these will not be complete unless the particular problems affecting the production of all types of ammunition are also outlined, since these problems are unique in themselves.

In the first place, for reasons which can only be psychological, the supply of ammunition is invariably taken for granted; yet no aeroplane, no tank, no gun, no rifle becomes in any way lethal until its supply of ammunition is ensured. Possibly the explanation may be that the task is assumed to be simple, and there is evidence to this effect when the million shells ordered by the first Minister of Munitions are remembered. The Gunner, however, is only interested in the complete, filled and assembled round ready to load into his gun. In this connection, it is of interest that the complete round of field artillery ammunition needs some fifty different contracts for its production.

Secondly, all these components and their explosives must come forward in a steady and synchronized stream to the filling and assembly factories, which themselves must be built, equipped and ready staffed to receive them; the words "built" and "equipped" being used specifically since there is no peace-time industry which is capable of conversion for this purpose. Thus, without meticulous and large-scale planning, the first stage of ammunition production is liable to turn into a glut of empty shell bodies, which happen to be the easiest component of all to produce, and the second stage into an odd assortment of filled and empty components.

Finally, the last two characteristics of ammunition production are the astronomical quantities required and the paramount importance of rate of production. Large stocks are unnecessary and in many ways undesirable provided that income is sufficient to meet expenditure. If therefore a shortage of ammunition is to be avoided during the first year of war, all the required potential must be ready and available in peace.

Sufficient has now been written of the technicalities of production and, if to this is added the now universal knowledge of the vastness of the effort required, the following conclusions may be drawn:—

1. Readiness for war depends on the immediate availability of 100 per cent. potential for all requirements at the maximum rate. As this needs effort on a national scale, there can be no question of re-arming without interference to industry.

2. The difficulties increase out of all proportion if the programme envisages a large expansion of the armed forces after mobilization. Incidentally any sudden decision to duplicate an army, even in time of peace, can have no effect on real military strength for some very considerable time. Conversely when Germany started a national programme of re-arming in 1933 and, in doing so, brought back to work her three millions of unemployed, there could be no other possible end

but war. It is even probable that the bloodless victories in Austria and Czechoslovakia may have been disappointments for the very reason that they were bloodless.

3. Finally, there is the more startling and depressing thought that a non-aggressor nation can never be really ready to resist at any given moment during a long period of international tension. Even if sufficient capital has been acquired, the potential which created it must either go on producing what may be useless weapons or else be dissipated. Once the latter has happened, the nation immediately ceases to be ready. Potential cannot under any circumstances remain idle.

So far the picture from the point of view of the non-aggressor is gloomy, and indeed that would be the truth if there were no way out. Fortunately the way out does exist and surely the answer must be to impose these self-same difficulties on the aggressor by some measure of control. Obviously it will not be possible to strangle permanently the whole industry of his country, but on the other hand it should be possible to strangle such parts of his total war potential as will make the remainder impotent.

Which industries then shall be selected? Our own experience answers immediately that the bulk of production delays are due to the need for setting up plant which has no place nor usefulness in peace. Under this heading come ammunition filling factories and also all plant used for the manufacture of propellants. There must be others also. It might even be possible to go still further and control the whole chemical industry where employed on nitrogen products, since this innocuous gas is father and mother of practically all explosives. However, this might not be practical, and who knows whither chemical progress will lead. Without filled ammunition and without propellants there seems no valid reason why Germany should not have all the aeroplanes and all the steel she needs. In any case most civil industries can very rapidly be turned over to the production of war material of some form or another subject to the proviso that jigs, machine tools and gauges are ready to hand. Here it is worthy of note that the machine tool industry in Germany increased three hundred per cent. between 1933 and 1938. Control this one cog in the armaments machine and the whole will stop.

Bitter experience has already taught us that voluntary disarmament by non-aggressors cannot end the risk of war. Let us try the other way round and concentrate upon the effective, perpetual and forced disarmament of the proven aggressor, striking if necessary before and not after he has built up his potential.

Finally, there is one other aspect of the problem of armaments which merits our attention. Our military unpreparedness for two wars in the space of a quarter of a century came as a great shock not only to the nation as a whole but even to many individuals holding responsible positions in the State. That such a situation should be possible can only be because assessment of actual military power is a more complex problem than a mere count of effectives or a casual scrutiny of annual estimates. Thus, under these conditions, there must always be a grave risk of foreign policy outrunning the military strength behind it unless and until the problem of armaments has become a well understood science. Conversely, until this has come about, it will always be far too easy for the Government of the day to skate along the surface of an armaments programme without ever being asked any really cogent questions.

R.A.F. NIGHT PHOTOGRAPHY

From an Official Source

IT is odd to reflect that, less than thirty years ago, when the first squadrons of military aircraft crossed to France with the British Expeditionary Force, the High-Command considered their part in warfare would be confined, almost exclusively, to reconnaissance. Yet such was the case. Both the Central Powers and the Allies in the war of 1914-18 began the fight with a fixed opinion that the part of aeroplanes in their plans was limited to the detailed observation of one another's movements and positions and the first aircraft to fly over combat areas were armed only with cameras.

In the present war, although the camera plays a very active part, in the sphere of bombing it is secondary to striking power. So complex has the air war become, however, that photographic records of targets, obtained before, during and after the attack, are essential to the planning and execution of the War as a whole.

Night photography was not practised in the first world war and aerial reconnaissance was limited to good daylight pictures. This was partly because the science was in its earliest infancy, but there can be no doubt that, had the war been less static and the occasion for night photography correspondingly urgent, research would have penetrated a good deal farther. As it was, experiments were well advanced when the Armistice came in 1918 and some extremely promising night photographs had been obtained from aircraft over East Anglia. The cessation of hostilities put an end to further research, and in the interests of economy no more experiments were made. They were not resumed until early in 1940 when the beginning of the air war thrust the science to the fore once again.

Night photographs were not taken during the leaflet raids, because they would have necessitated dropping flash bombs and, at that stage, such action might have precipitated the air war. Indeed there was no occasion to employ night photography to any appreciable extent during the first ten months of the conflict, as the activities of R.A.F. bombers were limited to attacks on maritime targets and to the distribution of leaflets. In May, 1940, however, when the Battle of France was raging, the first air photograph of the R.A.F. was taken by night over a railway yard on the Continent. It was a success and immediate arrangements were made to develop the art to its fullest extent. The remarkable progress achieved in a comparatively short space of time makes a fascinating page in the history of the Air Force. To-day each bomber leaving the base for an operational sortie carries an automatic camera which will bring back a record of the target as it appeared a few seconds before the impact of bombs.

In the interval between the close of the last war and the outbreak of the present war great strides were made in increasing the sensitivity of photographic materials. Prior to this, limited sensitivity had hindered the development of night photography; necessity to 'stop' movement by short exposure led to under-exposure. With greatly increased sensitivity, however, experts began to concentrate research upon two main factors; these were (a) should an instantaneous exposure be made during the explosion of a comparatively slow flash, and (b) could a flash be designed that would be quick enough yet sufficiently intense to give a satisfactory image while the shutter was held open in a 'time' exposure?

The F.24 'Automatic' was a compromise. This standard camera was modified and fitted with a rapid-action 'Louvre' type shutter which was opened by hand and closed through the action of a photo-electric cell actuated by the light of the exploding flash. The flash was formerly dropped by the wireless-operator when the bomb-aimer reported 'bombs gone.' This was the type of night camera in use when bombing ground targets became a regular feature of the War in 1940.

The reason for taking photographs of a target at night and during the actual bomb-run of the aircraft is not, as might be supposed, to record the bursting bomb and arrive at a preliminary assessment of the damage. Results of the bombing are invariably assessed by daylight pictures. Night photography is designed to establish whether or not the selected target has been found and hit. As the air war advanced certain self-evident facts emerged on this particular subject. It was found, for instance, that the presence of other sources of light over the target materially interfered with the success of the picture. The photo-electric cell was often prematurely operated by a searchlight beam and, while it was one thing to secure an excellent picture by night over a peaceful countryside, it was quite another matter to 'frame' accurately a target area when the camera was moving across a background of searchlights, tracer bullets, flak bursts, flares and fires started by predecessors. It was also found that, to be 100 per cent. successful, the entire process should be automatic. The photograph was always taken at the peak of the expedition—at the moment the bombs were falling on the target—and at this particular time each member of the crew was fully occupied with his individual task.

The problem of interference from rival sources of light was surmounted by further modification. The 'Louvre' type shutter was replaced by a focal plane shutter modified to give the effect of a 'time' exposure during which period the flash was pre-set to explode. This equipment came to be known as the Simplified Night Camera and is now in general use.

The answer to the second principal difficulty was effective automatic synchronization. The shutter had to open for a minimum period and that period had to be illuminated by the maximum amount of light. Complete synchronization was obtained with the introduction of the latest flash-bomb, which has been given a good deal of publicity since it was viewed at the recent R.A.F. Photographic Exhibition in London. To-day, the aircrew have very little to do with the taking of a picture by night. The bomb-aimer is the only man concerned, camera and flash-bomb having been loaded by the photographic ground staff before the aircraft left the base, and the process is set in motion immediately the bomb-release key is pressed. The flash-bomb, stowed with the normal load, is automatically released and simultaneously the camera is set going, the shutter opening four seconds before the flash and remaining open four seconds afterwards. In this way, far from proving a hindrance, the rival sources of light supply the plotters at base with abundant information regarding the position of flak batteries, searchlights, decoy fires and the ground fires already started by attacking aircraft.

The flash-bomb lights up the scene for $1/30$ th of a second. It has an estimated candle power of 170 millions, which compares with the 3-4 million candle power of earlier flashes. It looks very similar to an ordinary light bomb, measuring three feet in length by four and a half inches in diameter. It is fused to explode at approximately half the height at which the aircraft is flying. The tail, which is rather smaller than that of the normal bomb in relation to its size, is contrived to make the flash trail farther behind the aircraft, and this 'drag' enables it to light

up the area without coming into the camera's field of view. The bombs fall faster than the flash and are just about to hit the target when the flash explodes. The reason why the shutter is timed to remain open for a few seconds before and after the flash is to allow for a small margin of error in the explosion of the fuse.

The weight of the F.24 camera is 28 lbs. It has interchangeable units and films 125 exposures. The photograph taken over the target is known as the 'bombing frame,' but both before and after the frame is photographed the camera is taking other records; the film automatically winds over and the shutter opens and closes several times while the aircraft is over the target area. Sometimes ground detail is obtained in these photographs by means of illumination afforded by the flash of other aircraft. The movement of the aircraft is recorded as a streak across the film and when evasive action is taken this streak is curved or looped. Superimposed upon the film is a record of all other sources of light on the ground.

Nowadays R.A.F. photographers do not fly on operations. Their work essentially relates to the setting of equipment before the flight, its installation in the aircraft, its maintenance and the rapid developing and printing of results obtained. All this is carried out at the base. The photographers are patient, highly skilled men and women and a large measure of the success of our bombing offensive is attributable to their labours. Photographs are often required at very short notice and sometimes have to be rushed from the aircraft and developed immediately. This can be done in seven minutes when speed is essential. As long ago as December, 1940, the photographers were turning out prints on bromide paper at the rate of five hundred an hour. Men and girls engaged in this work were often professional photographers before the War, but many have been trained since entering the Services. All undergo a fourteen weeks course at the R.A.F. School of Photography.

Although the aircrews are not primarily concerned with the taking of photographs the science has a place in their training schedule and a certain amount of time is spent teaching them the basic facts of the camera's work.

Photographic interpretation is a separate branch in the R.A.F. and its staffing is distinct from that of the photographic. Interpretation is a very highly-skilled occupation; aerial views meaning little or nothing to the layman mean a great deal to the experienced interpreter. From time to time aerial views of the damaged cities of the Third Reich have been published in the Press and although, in many photographs, the havoc wrought by high explosive and incendiary bombs is quite obvious, in others the birdseye views of 'before and after the attack' do not appear to reveal any great changes. This is because the finer points of interpretation have been missed; they are not obvious to the naked eye. For one thing scientific deduction plays an important part in the correct reading of an aerial photograph, and for another interpreters employ special apparatus when searching for factors they will embody in their reports. The correct reading of shadow is important.

The Nazi attack on Russia in June, 1941, was anticipated by the enemy's inability to prevent the Allied camera from spotting the movement of material to the East. The type of traffic outside a factory indicates what sort of work is going on inside the building; a loop line on a railway may suggest the presence of a battery; tiny white circles of upturned earth indicate cable laying. These are some of the points which tell interpreters facts they seek to establish or corroborate from previous pictures, but night photographs are necessarily limited in the amount of subject matter they reveal. One can be quite certain, however, that they do reveal a good deal beyond answering the question—was the target found and bombed?

Until recently night photographs were always of the vertical type, but recent development indicates that the time is not far distant when the field of night reconnaissance will be as wide as that of daytime, both in the taking of vertical and oblique pictures from the air.

The taking of moving pictures is primarily a daylight occupation, but some highly successful reels have been taken by night. Some readers may recall having seen a revealing sequence shot over a German city during an attack one night last year. The entire panorama of winking flak batteries, conflagrations and flares, swept by groups of searchlight beams, was thrown on the screen affording an exact reproduction of the scene witnessed by British aircrews taking part in the raid. Some of the best moving pictures of this type were taken during the 1,000 bomber raid on Bremen in the early summer of 1942.

Even though the more immediate problems of night photography have been solved the science is not at a standstill. In no other sphere is a more intense period of research continuing, and adjustments, adaptations and experiments of all kinds are being made and tested with new apparatus day by day. As the air war reaches its climax some of these experiments will be incorporated into the routine of night photography.

ESPRIT-DE-CORPS

By "TORGWYN"

THE simultaneous appearance in the February number of this JOURNAL of the articles by Lieut.-Colonel Kaulback, Major de Brett and "Old Soldier" is an interesting coincidence. Lieut.-Colonel Kaulback is obviously familiar with the constantly changing organization of the Army of to-day, and it is difficult for "old soldiers" to challenge his recommendations for the future. At the beginning of this war and of those of the past the Army was faced with the task of transforming a small retail shop into a vast wholesale business. It is to be hoped that some such reorganization as that suggested by Colonel Kaulback may result in a permanent decentralizing of Army administration, and give us a number of smaller "retail shops" to expand instead of only one. There seems, however, to be no reason why such reforms should necessitate the disappearance of regimental tradition and esprit-de-corps.

"Old Soldier" is right in deploring the "influx of junior staff officers with such short service that they have had no time to develop regimental feeling." Most of them are not soldiers at all, and some have probably no wish to be. There are some young officers at home who feel that they are lowering themselves by having to mix with the "Blimps" and jail-birds of the Regular Army; though their bearing is often amusingly reminiscent of the stage officer or sergeant-major. Those who are perforce regimental officers cavil without ceasing at the iniquities of the "staff." They forget that from the War Office downwards the staff is permeated with amateurs like themselves, who cannot put pen to paper without indulging in the vagueness and verbosity that is so often noticeable in civilian correspondence. The resulting confusion is described as being "typical of the Army!"

Unfortunately, the tendencies that "Old Soldier" so rightly deplores are not entirely due to the ignorance and inexperience of junior staff officers. Both Colonel Kaulback and Major de Brett refer to the "Corps of Infantry" as though it were, at any rate, a foregone conclusion; and it is to be feared that reorganization on such lines is fostered at much higher levels. It may be presumptuous to question decisions made in the seats of the mighty, but one cannot help feeling that they may be the product of "brains without intelligence" which Professor L. P. Jacks has described as being "like a horse without a rider, a dangerous and unmanageable animal"; and they call to mind the attitude of the character in the "Hunting of the Snark" who said, "What I say three times is true."

The writer served on the staff for some years in war and peace. He has never doubted that in the British Army a commander or staff officer who lacks regimental experience is gravely handicapped, and he was so taught at the Staff College. No one questions the efficiency of the German Army, though its early successes against little or no opposition may have led us to exaggerate it. On the other hand, would any one argue that the methods of dealing with the German soldier are applicable in the armies of Great Britain, of the Dominions or, for that matter, of the United States? An officer of those armies must know his men and understand how to manage them; and they must know him. Men of British descent cannot be herded about like cattle. The more intelligent and better educated they are the less readily will they respond to officers whom they hardly know by sight. The truth of this,

especially in the case of wartime soldiers without previous Regular training, is admirably demonstrated in Henderson's *Life of Stonewall Jackson*. Contrary to the belief so sedulously fostered by the sneers of cheap newspapers and scurrilous caricaturists, the officers and men of the Regular Army have for many years past been by no means the illiterate blockheads they are made out to be; nor will they be less intelligent in the future.

A prominent characteristic of the British race is factiousness: the tendency to criticize, to think oneself as good as one's neighbour or better, and to act on that opinion. It is not, in itself, a virtue, nor are its manifestations always to be admired; but it has had many good results. It caused the barons to defy King John. It inspired the revolt against Rome in the days of Henry VIII and the enterprises of Drake and his like. It was the mainspring of the resistance of the House of Commons in the days of the Stuart kings, of the American Colonies to the wrongheadedness of George III's Government, and of the Confederate States in defence of States' rights. But it has never been inconsistent with loyalty to well known and trusted leaders; and this combination of independence of spirit with willingness to be led, particularly in times of crisis, is democracy in the best sense of the word. It is also, no doubt, the source of our love of competition in sport and games. Another marked characteristic, at any rate of the British nation, is the liking for "associations," such as clubs, trade unions and other combinations. In the Army it is exemplified by regimental, battalion and battery esprit-de-corps. It may be sneered at as parochial, but to try to override it is a psychological error.

There is also in Great Britain a great deal of territorial feeling. It is particularly strong in the country, but it exists also in towns as, for instance, in the boroughs of East London. This may seem strange to a rootless individual who has never lived in the country and thinks that one street is much the same as another; but it is none the less real.

I venture to think that Colonel Kaulback lays undue stress on the existence of the "battalion feeling" which he seems to deprecate. In the case of a few regiments with which I am acquainted, it was still just alive fifteen years ago, and was originally a consequence of the arbitrary and rather tactless methods adopted when battalions were "linked" sixty odd years ago. By to-day it must surely have disappeared and regimental esprit-de-corps must have taken its place.

There are other arms to be considered. There is regimental tradition in the cavalry, and in a different sense of the word in the artillery. It may perhaps have begun to develop in the Royal Tank Regiment. It is difficult to see what benefit would be derived by destroying these traditions and trying to substitute a loyalty to some undefined, and not necessarily permanent, formation such as a brigade group, a division or an army. Nor do we want "private armies." It is true that in the last war there was at least one conspicuous example of "formation esprit-de-corps," namely, in the 7th Division. In this war there may be more than one; but must it be at the expense of the historic regimental traditions?

As Colonel Kaulback says, all infantry before this war performed the same function in spite of varying nomenclature; but it seems that the officers of the future "Corps of Infantry" are to be trained with some seven different types of that arm whose several functions vary a great deal. They must, therefore, be transferred from one "type" to another at frequent intervals during their service. Incidentally, when does a hill become so steep as to necessitate the use of a "mountain division?"

As a gunner it is the writer's experience that between this war and the last artillery units were much handicapped by constant changes among their officers. In 1935, when in India, he was in a position to ask for a return giving the number of officers who had passed through each of three field brigades (or, as they are now called, "regiments") during the previous four years. The returns showed that with an establishment of 27, one brigade had had over 90 officers in the period, another had had 54, and in the third brigade the figures were about midway between those of the other two. These numbers included, of course, the officers actually serving in the units when the return was called for. Changes were to a considerable extent due to the rule which enabled an officer to transfer to the Home establishment after six years in India; but there were many compulsory transfers to other branches of the artillery. It is hard to believe that such a state of affairs is desirable, and it is doubtful whether cross-posting between various "types" of infantry will have the advantages that Colonel Kaulback anticipates. A jack of all trades is master of none.

It is of course absolutely necessary that officers should be taught the functions and tactical methods of other arms and the vital importance of co-operation. But this can be done (and in the case of artillery and infantry it was attempted with some success before the War) without cross-posting officers. Good leadership is all important. "An army of stags led by a lion is better than an army of lions led by a stag," and our soldiers are better led by officers they know than by comparative strangers. There is no doubt that in old days, and even recently, there was in the cavalry and infantry too little interchange, especially of commanding officers. But why should it always be necessary for us to go from one extreme to the other, not only in the Army but in other affairs?

The Army organization adopted at the end of the war must, of course, be very different from what it was, and even perhaps from what it is now. But there seems no reason for destroying regimental and other traditions or for breaking up the territorial organization; and the writer is heretical enough to wish that the territorial principle could be applied to the Royal Artillery. If so, the appalling problems that A.G.6 has had to face during the past four years should not recur, if—which Heaven forbid—we ever had to fight another major war.

THE FUTURE OF OUR NAVAL RESERVES

By COMMANDER G. C. STEELE, V.C., R.N.

THE future of our Naval Reserves presents a number of problems, for conditions determining their organization and training are always changing and they are often difficult to foresee; yet Reserves have to be built up over a number of years and are influenced both by economic and political backgrounds. It is not proposed here even to outline the history of our Naval Reserves, but only to review these problems in the light of the experience of two wars, and to endeavour to forecast the changes which may be needed after this war.

At the outset it is of interest to note that the constitution of the present Reserves has been determined by a long-term policy, and that (1) the ex-Service man has always been liable to be recalled to the colours in time of war or emergency; (2) the Royal Navy has hitherto been dependent upon the Merchant Service for bringing its ships up to war complement; and (3) elements of the civil population were in former times impressed for naval service, and the laws relating to impressment have never been repealed. These three categories provided the forerunners of the present Reservists—ex-Royal Navy; Royal Naval Reserve; and Royal Naval Volunteer Reserve; and it seems that, in future, there will still have to be three distinct groups. It will be convenient, therefore, to deal with them, each in turn, in the light of the effect of new conditions and weapons of war.

One factor which affects the whole subject is the accelerated pace of modern war caused by air power, which can strike immediately, and can strike home. It may now be possible for a belligerent to deliver a knock-out blow at the outset, and indeed this has been done in the case of certain of the smaller states. The fact that the Allies have, nevertheless, sustained a five year war is misleading as a future guide. It is no longer permissible to count on there being time to build up temporary reserves after the outbreak of war. We must ensure that there shall be an adequate and trained reserve available at all times, and this must be taken into consideration for each class of reservists.

I. RESERVISTS—EX-ROYAL NAVY

No great change in the constitution of the ex-Royal Navy class need be contemplated, but it is suggested that there should be some form of training, or refresher courses, in normal times of peace. For convenience the Retired Naval Officer will be included in this category because he is subject to the same regulations as the seaman for being called up.

The refresher course is the natural corollary to the great technical advances that have been made in modern weapons and devices. A two weeks course every two years can be regarded as a minimum training period for keeping in touch with latest technical developments. Technical courses for Retired Officers were started before the War, and new services, such as Naval Control, conducted exclusively by Retired Officers, were inaugurated. But emergency is not the best time to undertake training, and in the previous long spell of comparative peace no organized training existed either for the Retired Officer or for the time-expired rating, with the result that the valuable technical knowledge which they had acquired in many years of service was allowed to get out of date.

Test mobilizations, which recalled naval reservists to naval service, have taken place periodically in peace time, but they were in the nature of emergency or precautionary measures in a national crisis. The experience gained from these tests, both by the drafting authorities and Naval Depots, as well as by the rating himself, was invaluable.

It appears highly desirable, therefore, that both refresher courses and periodic test mobilizations should be placed on a systematic footing in peace time. The Retired Officer and the time-expired rating are bound to the Navy by a bond of sentiment which far outweighs any personal considerations which such training may involve. This was fully demonstrated by the willingness with which they responded to the special courses before the War. As in the case of the R.N.R. officer, full allowance could be made for individual cases of hardship among naval reservists presenting themselves for training, and a wide latitude of time should be allowed for completing courses. The nature of the courses, both for officers and ratings, should have a strict bearing on their former specialities, and the appointments they are likely to take up in war-time. The courses might be held either ashore or afloat, or a period combining both.

Next in importance to periodic courses comes physical fitness, which is allied to age. Each training period would provide an opportunity for a medical examination, and thereby for the elimination of the unfit. It would be possible to differentiate to some extent between officers on the Retired List liable for sea service, and those only suitable for shore appointments; and a similar distinction would have to be made in the case of ratings on the Reservist Lists.

"Reserve of Officers" appears to be the best title for the class of Retired Officers liable to be called up in emergency or war for active appointments. The title is a fitting one and is taken from the Army without apology. "Naval Reservists" seems the most comprehensive title for all classes of ratings subject to recall, and is more descriptive than the old title, "Royal Fleet Reserve," which was used for a certain class of reservist before the War. A reduced upper age limit (for the Retired Officer at any rate) would complete the qualifications for the Reservists considered under this first category.

The "Reserve of Officers" would then be formed of officers selected from the Retired List, including the whole of the present Emergency List, which comprises comparatively young officers. These officers would be trained in the latest technical subjects and would be of a fairly high physical standard. The same applies to the ratings on the Reservists List, although in their case a slightly reduced physical standard might be acceptable owing to their lesser responsibilities. The psychological effect of periodic training on the Retired Officer or time-expired rating would be considerable: he would face mobilization, not as a rusty "dug-out," but as a member of a select Reserve with up-to-date knowledge. The question of employment of Retired Officers and ratings not on the Reservists List is not attempted here.

II. THE ROYAL NAVAL RESERVE

The experience of two wars seems to indicate that the Royal Naval Reserve needs radical change in its constitution and training. In addition to speeding up the means of attack at the outbreak of hostilities, the development of aircraft and submarines has been responsible for the appearance of an elaborate defensive armament in all but the smallest merchant ships; indeed, the larger merchant ships are now scarcely distinguishable from certain types of warships. Right of

search, safety of crews, and immunity of merchant ships from attack or capture have disappeared in the special nature of air and submarine warfare. Even a belligerent who might be willing to recognize former laws of warfare could not now practise them. The merchant ship is invariably termed a "supply ship" when attacked, and she is forced in a great measure to defend herself, not only when proceeding unescorted, but when the air and anti-submarine screens are penetrated in a convoy, as is always liable to happen no matter how adequate the escort.

To meet all forms of attack a substantial armament has been evolved for her. This ranges from guns of 6 in. calibre to a formidable battery of light A.A. guns. Stationkeeping, manœuvring in convoy, coding and confidential book-keeping, warship and aircraft recognition, submarine and aircraft lookouts, and extra signalling are amongst the duties which have to be added to those on the peace-time list, while normal navigational facilities will have largely disappeared. How are these war requirements to be met by a Merchant Navy personnel run, naturally, on strictly economical lines in peace time, with every officer and man fully employed, and no reserves to draw upon? The situation is still further complicated when we remember that the Merchant Navy has hitherto been regarded as a source of recruitment for bringing the Royal Navy up to war strength, for which object the pick of its personnel—members of the R.N.R.—are liable to be removed for Naval service.

The anomaly, therefore, presents itself that Merchant Navy personnel, which requires to be increased in war-time, is liable to reduction. It is true that many R.N.R. officers were exempted from naval service in this war and others were subsequently released; also that the guns in merchant ships were first manned by D.E.M.S. ratings, and that later the Maritime Regiment was formed. But all this savours more of adjustment than it does of system, and at the best the result is to create composite crews for merchant ships, more in keeping with General Monk's time than with present-day requirements. It further introduces anomalies in discipline, pay, duties, and relationship between the Master of the ship and those serving her armament. It is difficult to conceive how a maritime regiment could be trained in merchant ships in peace time; therefore the present arrangement, which took many months to organize, can hardly be regarded as a satisfactory system to provide an adequate and trained personnel at the outbreak of a future war. Something more than an adjustment of crew—removing certain men, and adding others—is required, especially when we recall that many merchant ships closely assimilate the functions and armament of certain classes of warship.

The scheme suggested here is briefly to retain all Merchant Navy officers and men in their ships in war-time, to call up retired Merchant Navy personnel for their own Service, and to train them in peace time in the use of the weapons their ships will carry in war. On a small scale the nearest analogy we can find to the scheme is the training in peace time of trawler skippers and leading hands in minesweeping, which operation many of their ships carry out in war. Courses in naval subjects were organized before this war for Merchant Navy officers, but they covered little of the essential ground. A much more embracing scheme is required to include the majority of officers and men of foreign-going merchant ships over a given tonnage.

Should compulsory service be in force after the War (and it is presumed that Merchant Navy personnel would not be exempted), the problem of this training would be much simplified. Under non-compulsory service conditions it would be

necessary to establish a "Merchant Naval Reserve"—perhaps by Royal Favour, a "Royal Merchant Naval Reserve." It would need to include a far greater number of men than did the permanent R.N.R. But, judging by the number of applications for the R.N.R. before the War, a few only of which could be considered, there should be no difficulty in getting the large majority of Merchant Navy officers and men to form a reserve capable of manning the armaments of their own ships without outside aid. The effect of this would be to increase greatly the establishment of the present permanent R.N.R., but its new role would not demand such extensive or specialized naval training, for it would not aim at making the Merchant Navy man a Royal Navy man. Warship organization and many technical subjects could be omitted from the curriculum, and training would be confined to the weapons and tactics to be employed by merchant ships in war.

Under the system of retaining Merchant Navy men in their own ships in war-time, the minimum dislocation would be caused to shipping. The shipowner, confronted by many new difficulties and demands at the outbreak of war, would at least retain his own employees. Discipline would be strengthened by a single code—the Naval Discipline Act—a very necessary measure in war-time. Many old anomalies would disappear, notably the "T.124 Agreement," whereby naval and mercantile ratings serve in the same ship under different rates of pay. Economy of personnel would be effected because Merchant Navy officers and men would be able to combine duties with the ship's armament with their ordinary ship duties. The obscure relationship between the Master and the officer in charge of ratings, and their divided responsibility, would give place to the Master being captain of his ship in every sense of the word, and his officers exercising direct authority over all members of the crew. Generally speaking it would be felt that the Shipping Industry, at any rate, had "put its house in order" for war time. Under this system the Merchant Navy would be a self-contained service, having much of the efficiency of the Royal Navy, and truly qualified for its title. In making this proposal it is realized that the training of the personnel would take time—measurable even in years, and there would be many problems to be solved,¹ and much opposition to be overcome, but they should not prove to be insuperable.

A fundamental mistake in dealing with problems connected with the Merchant Navy is to regard it as a single service. It is more correctly a collection of services, or shipping companies, each with its own traditions and character, and covering a vast range from the ocean liner to the humble coaster. Personnel "pools" and standard uniform have never been popular measures. Generally speaking, the more the shipowner is left in control of his own men, the better. The question of the authority to be exercised by the Admiralty or Ministries in war-time is not touched on here; it would, however, appear logical that Commodores of Convoys should be taken from the Merchant Navy captains' list.

The above are only a few of the points that would have to be taken into account in drawing up a detailed plan for forming a "Merchant Naval Reserve."

III. THE ROYAL NAVAL VOLUNTEER RESERVE

If the principle is accepted that in future the Merchant Navy will not surrender any personnel to the Royal Navy in war-time, an important source of supply for bringing the Fleet up to its war strength will be cut out. The Navy's requirements would then have to be met by its own reservists and the R.N.V.R. The former

¹ For instance special provision would have to be made for Lascar crews.

will necessarily be limited in numbers, but the latter is capable of almost unlimited expansion.

The Navy has always attracted recruits to a degree which permits of a close selection. Even if military service should not be compulsory after the War, candidates for the Navy would be forthcoming in sufficient numbers to meet all demand. But, unlike the Naval Reservists and R.N.R., the R.N.V.R. mainly consists of "landsmen," an exception being made in the case of the yachtsmen. Training is, therefore, twofold; first to make the recruit a seaman, and secondly to train him in naval weapons. The former presents the bigger problem because it takes longer, and training, if it is to be realistic, must be carried out at sea.

It is here we turn to yachtsmen—not necessarily the yacht owner, but the man who dabbles in little ships. No better training ground exists for pure seamanship, pilotage, and small craft handling than the yacht club. Many praiseworthy efforts were made to popularize the sport before the War, notably the encouragement given by Lord Monsell, when First Lord of the Admiralty, and by the founding of the Royal Naval Sailing Association and the Little Ship Club. But the interest of authorities was deplorably lacking. In the great London River, for instance, scarcely a spare yacht berth existed between London and the Nore; yet the scheme to construct a harbour at Southend never matured. Many sea-minded Londoners struggled with a "cabin cruiser," converted from a discarded ship's life-boat in their spare time. These people led a hazardous existence in tide and river traffic and were generally regarded as a nuisance. Nothing in this country corresponds to the "yacht haven" of the Continent, which is open to all and to be found in rivers more tidal than the Thames. Across the Channel in peace time yacht berths are free, river banks have facilities for making fast alongside, caterers serve the yachtsman's requirements at his yacht, inland water buoyage is vastly superior to ours and takes into account the yachtsman's needs.

Much was written before the War regarding the necessity for a large Mercantile Marine as complementary to the Navy for sea power. It is hoped that in future yachts will be regarded as the national training ground for the war reserve of the Royal Navy, and get the attention they deserve. With yachting popularized, and the seamindedness of our population fully developed, the greater part of the training of a R.N.V.R. recruit would be completed pre-entry, and training could then be confined to naval technical subjects. This would materially reduce the task of forming a large naval reserve from the civil population.

Consideration of the reconstruction of the Reserves suggests new titles; but the old names, however incongruous and inappropriate they may be, have claims on sentiment and traditions which cannot be lightly ignored. "Royal Fleet Reserve," which denotes a class of ratings and does not include officers, might well go. A change of the title, "Royal Naval Reserve," to "Royal Merchant Naval Reserve," would add an honourable name, and may, therefore, be worth consideration. Well established traditions may well reject any alteration to the title "R.N.V.R."; but the meaning of the word "volunteer" would disappear if compulsory military service persisted after the War: "Royal Naval Reserve" would, in fact, be a more fitting description of the civilian's, or yachtsman's, reserve, leaving "R.M.N.R." to take the place of the present "R.N.R." In any case it seems "R.V.N.R." would be a more consistent title than "R.N.V.R.," if the voluntary system is resumed after the War.

In building up our Naval Reserves in peace time full use should be made of the many private nautical training establishments in the country. In the Nautical College which the writer formerly commanded, six nominations per annum for Midshipmen, R.N.R., was the original quota, but it proved possible to increase this number to fifty a year before the War.

The Sea Cadet Corps, by virtue of its large membership, can be regarded as the most important youth nautical training organization for seamen boys. Originally started by the Navy League, its training was taken over by the Admiralty early in the War, the Navy League retaining an administrative and welfare interest. Its membership increased greatly until the Sea Cadet Corps took its place with the Army Cadets and Air Training Corps of the sister Services. There seems to be every intention to retain it after the War, both as a youth movement, and as a source of recruitment for the Navy. Of those boys under training not making a career of the sea, the R.N.V.R. should draw a full share of recruits.

SUMMARY

The following is a short summary of the changes that have been suggested in the three classes of Naval Reserves, and of the principal object of these changes :—

(I) RESERVISTS—EX ROYAL NAVY : A definite distinction is suggested between those on the retired lists who are physically fit for active service, and those who are not. Those in the former group should be subject to periodic test mobilizations and refresher courses, and termed " Reserve of Officers " and " Reservists—ex Royal Navy," for officers and men, respectively.

(II) ROYAL NAVAL RESERVE : The present list to be expanded to include the majority of officers and men of the Merchant Service serving in ships over a certain tonnage. Their training to be restricted to the use of the weapons and the tactics which their ships will employ in war. Crews of merchant ships to be retained in their ships and to be supplemented by retired Merchant Navy officers and men in war time. Suggested new title, " Royal Merchant Naval Reserve."

(III) ROYAL NAVAL VOLUNTEER RESERVE : To be expanded considerably in order to compensate for the loss of Merchant Navy personnel to reinforce the Royal Navy in war time. R.N.V.R. recruits to be drawn primarily from the yachting personnel. Technical training to be carried out by the Royal Navy.

It will be seen from the above that the numerical strength of the last two classes would be greatly increased and would dispense with the appointment of temporary reservists in war time, other than for replacing wastage and casualties. The target aimed at is to have trained Reserves adequate to meet the requirements of the Royal and Merchant Navies at the outbreak of war. With conscription in force the Naval Reserves would form an integral part of a National defence scheme, and as such would require no special provision, for it is presumed that the personnel of the Merchant Navy would not be exempt from military service. Under the voluntary system of pre-war days, however, a large grant would be necessary to organize and train reserves on the scale suggested. But if we want preparedness we must pay for it. The last five years have taught us that lack of preparedness is more costly than preparedness.

BOMB DAMAGE TO GERMAN WAR PRODUCTION

SOME EXAMPLES

From an Official Source

BERLIN

THE number of factories destroyed or damaged in air attacks on Berlin between 18th November, 1943, and 15th February, 1944, is estimated to have been at least 326. There are many hundreds of these factories in that city, varying from major plants to small component-producing factories. There are also many smaller workshops in sheds, outbuildings, garages, or shops where there are lathes or benches which are assisting in the manufacture of components.

Factories in the Berlin area regarded by the Ministry of Economic Warfare as of the highest importance to the enemy's war effort or economic survival are included in an M.E.W. priority list of key-points. There are 103 industrial factory plants in this list—the largest number in any city in Germany of listed key-point factories. The list is divided into four categories, called Priorities.

Priority 1 + factories are those engaged on vital war industries: Krupps of Essen or the I.G. Farbenindustrie Chemical Works at Ludwigshafen are examples of plants in this highest category. In Berlin there are eight of these factories, and five of them were hit by Bomber Command; in four of these the damage was very severe.

Priority 1 factories are major plants in war industries. Included in this category are many large aircraft factories—engineering, chemical and other plants.

Priority 2 factories are slightly less important plants in major industries, or major plants in less important industries.

Priority 3 are important subsidiary factories in war or major industries.

The following table shows the rated factories in Berlin and the extent of damage they have received. Damage has been classified in two categories:—

- (1) Most serious destruction down to major damage to important buildings, plus subsidiary damage;
- (2) Damage that is less serious, but certainly still significant.

Priority	Total in Berlin	First Category Damage	% for 1st Category	2nd Category Damage	Total Damage 1st and 2nd Categories	% of Total
1+	8	4	50%	1	5	63%
1	24	12	50%	4	16	67%
2	41	6	14.5%	6	12	29%
3	30	7	23%	4	11	37%
Totals	103	29	28%	15	44	43%

PRIORITY 1 + FACTORIES

The huge Rheinmetall Borsig armament and engineering plant, employing 25,000 workers, is among the Priority 1 + factories in Berlin which have been very seriously damaged. Like many other plants in Berlin its relative importance has increased greatly because of the destruction of so many other plants in more western districts of Germany: Rheinmetall Borsig has had to carry all that it could of the production lost at Krupps. This plant produces armaments of all kinds, including guns, mines, ammunition, torpedoes and bombs. Included in its great complex is the Altmarkisches Kettenwerk G.m.b.H., usually known as Alkett, which is regarded as the most important tank factory in Germany. In the considered opinion of economic experts, from evidence to hand at the end of last December, the production of tanks by Alkett was entirely at a standstill, and recovery would not be possible for many months.

Berlin is the most important centre of electrical engineering in Germany, and four Priority 1 + plants in this industry have suffered serious, some very serious, damage: These are Siemens Kabelwerke, the A.E.G. Cable Works, Siemens and Halske A.G., Accumulatoren Fabrik A.G.

Key-point factories, of Priorities 1, 2 and 3, which have received 1st category damage are as follows:—

PRIORITY 1 FACTORIES

<i>Factory</i>	<i>Product</i>	<i>District</i>
A.E.G. Works	Submarine engines, turbine assembly. Iron foundry.	Tiergarten.
Schering A.G.	Chemicals	Wedding.
Deutsche Industrie Werke A.G. (including Spandauer Stahl Industrie G.m.b.H.).	Guns, gun components, gun carriages, small arms.	Spandau.
B.M.W. Flugmotorenwerk Brandenburg G.m.b.H.	Radial air-cooled aero-engines ...	Spandau
Bergmann Electricitäts Werke A.G.	Steam turbines, dynamos, cables, insulating materials, etc.	Renkow
Argus Motoren G.m.b.H. ...	Aero-engines and components ...	Reinickendorf
J. D. Riedel and de Haen A.G. ...	Chemicals	Neukölln.
A.E.G. Transformatoren Fabrik	Transformer casings	Kopenick.
G. Lorens A.G.	Wireless and blind landing apparatus.	Tempelhof.
Telefunken Ges. für Drahtlose Telegraphic.	Radar and wireless apparatus ...	Steglitz.
Ambi-Budd Presswerke A.G. ...	Pressing for engineering industries	Treptow
Henschel Flugzeug-Werke A.G.	Aircraft assembly and repair ...	Treptow

PRIORITY 2 FACTORIES

Osram G.m.b.H.	Radio valves	Tiergarten.
Focke-Wulf Flugzeugbau G.m.b.H.	Aircraft components and assembly.	Treptow.
Bussing N.A.G. Vereinigte Nutzkraftwagen A.G.	Lorries, tanks, wireless equipment.	Kopenick
Elektro-Thermit G.m.b.H. ...	Welding apparatus	Tempelhof.
A. Flettner G.m.b.H.	Aircraft assembly and repair ...	Treptow.
Zeiss Ikon A.G.	Optical instruments	Steglitz.

PRIORITY 3 FACTORIES

<i>Factory</i>	<i>Product</i>	<i>District</i>
Norddeutsche Dornierwerke ...	Aircraft components ...	Reinickendorf.
Deutsche Waffen und Munitions Fabriken A.G.	Armaments ...	Reinickendorf.
Auto-Union A.G. ...	Military vehicles ...	Spandau.
Dr. Cassirer and Co. A.G. ...	Electric cables ...	Charlottenburg.
Hakenfelde G.m.b.H. ...	Aircraft instruments ...	Spandau
Chemische Fabrik Grunau A.G....	Chemicals ...	Kopenick.
Siemens Apparatbau ...	Aircraft instruments ...	Lichtenberg.

Fourteen other factories in these three Priorities have received 2nd category damage.

In addition to the 103 industrial factory plants and factories in the M.E.W. Priority list, there are at least 500 other identified factories of which the names and products are known. Of these, 209 have been damaged; 151 of them have suffered first category damage and 58 of them second category damage.

It is not always possible to name every factory in a German industrial town. Many factories have, of course, been built since the War. In a number of instances the product can, however, be identified in air photographs. Seventy-three industrial works which cannot as yet be identified have been hit; in 46 of them the damage is in the first category; in 27 of them the damage is in the second.

APPARENT SHORTAGES

Certain shortages affecting both the enemy's armed forces and his industrial economy have already become apparent, almost certainly as a direct result of the damage to industrial plant in Berlin. There is clear evidence that the Germans are finding it increasingly difficult to maintain the tank strength of their Panzer divisions. German tank production and assembly is concentrated in comparatively few works, of which three of the most important are in Berlin. The loss of the tank production of Alkett and Rheinmetall Borsig has undoubtedly contributed largely to this shortage.

There is at the present time a bottle-neck in the supply of large electrical equipment in Germany. The major damage to the Siemens, A.E.G., and Osram plants—each of these great firms has its principal factories in Berlin—may well be the reason why some of Germany's synthetic oil plants have been unable to complete their construction programme and cannot come into production for lack of this vital equipment.

An additional and serious loss of production besides that which results from the destruction of factories is the direct consequence of the system which has been developed in Germany of farming out work from many factories to home-workers. This system of homework—*Heimarbeit*—has for long obtained in Berlin, particularly in the clothing and electrical industries. Since the War it has been extended to the production and assembly of small parts for the engineering industries. This type of additional war production has been considerably diminished by air attack. Neutral observers have described how often the collapse of a wall of a bombed house in Berlin has revealed a lathe or testing instrument in the living room.

The economic importance of Berlin, and consequently of the very high proportion of key-point and other factories which has been damaged can hardly be

overstated. It has only been during the past winter that we have had the means and resources to attack this great processing arsenal.

In area and population the German capital is about half the size of London. Its population of about 4,400,000 is equal to the combined populations of Munich, Cologne, Leipzig, Essen, Frankfurt, Hanover, and Nuremberg. All the towns of the Ruhr put together have a smaller population. But the economic importance of Berlin must not be measured only by the numbers of workers available, though this factor becomes increasingly important as other industrial centres are destroyed. Berlin contains one-tenth of all key-point factories of military importance in urban Germany; there are as many priority factories in Berlin as in Munich, Leipzig, Cologne, Hanover, and Mannheim together. In the whole of the Ruhr, before last year's battle of the Ruhr, there were only one and a-half times as many such factories as in Berlin. Whereas the Ruhr possesses the greatest concentration of heavy basic industry in Europe, Berlin, by contrast, is by far the greatest processing centre in Continental Europe.

One-fifteenth of all the factory workers in the whole of greater Germany—Germany, Austria, Sudetenland, and German Poland—are in Berlin. But the importance of Berlin to the war effort is even greater than this figure would suggest because of the exceptionally high proportion of the population—one person in every seven of the total population of Berlin—engaged in essential war industries. Two-thirds of the operatives are in war industries; the remainder are producing necessities essential to enable the country to carry on. Of the war industries the most important are armaments, engineering, chemicals, and explosives, precision instruments, and aero-engines. But the plants producing aircraft, locomotives, and machine tools, come a close second. One-third of all the locomotive production of Germany proper is in Berlin. Machine tools—an industry which throughout Germany has suffered particularly severe damage, are a product of the greatest significance to all German war production and to the restoration of industrial plants destroyed.

DAMAGE TO COMMUNICATIONS

Damage to communications in Berlin, the main transport centre of central Europe, has been very severe. In addition to earlier damage, which included the gutting of the Lehrter and Potsdamer Stations and of almost the entire group of railway buildings and warehouses at the Lehrter goods station, there has been severe damage to railway property in the Kreuzberg, Lichtenberg, Schonberg, Steglitz, and Horst Wessel districts. Railway workshops in the Treptow district have been very seriously damaged as well as State Railway Works in the Tiergarten district.

The chief administrative offices of the whole transport organization are in Berlin and no fewer than fourteen main lines radiate from the German capital. Railway damage in the capital is therefore of great consequence.

DAMAGE TO PUBLIC UTILITIES

During the whole period of the fifteen major attacks, public utilities have been repeatedly hit, and the effect of this in reducing production even in undamaged factories must have been immense. After air attack the damage to public utilities must always be repaired before anything else. No repairs, even to the most important factories, can begin without power, transport, water and light, and the more serious the damage to these utilities the slower the city's industrial recovery. Two of the three power stations hit, Bewag West power station and Bewag Klingenberg power

station are easily the largest in the city and objectives of the greatest industrial importance; Bewag West has been very seriously damaged and Bewag Klingenberg slightly.

DAMAGE TO GOVERNMENT OFFICES

The main offices of twenty-one Government Departments have now been damaged, most of them severely. There is already definite evidence of administrative confusion in Germany and, indeed, throughout German Europe, as a result of the destruction of Government offices and vital records.

One result of special importance for the industrial output of Berlin is that large numbers of workers have evacuated themselves from Berlin without official sanction. They have been threatened with the withdrawal of food ration cards, but this is of little use in the absence of records.

AUGSBURG

The M.A.N. works at Augsburg, by far the largest producers of submarine diesel engines in Germany, has virtually been destroyed. The plant, which covered 260 acres, was turning out half of Germany's production of these engines, and could have met all the enemy's requirements if its full capacity had been used. The destruction, for all practical purposes, of this vital plant—rated by the Ministry of Economic Warfare as a Priority 1 + factory—is clearly shown on reconnaissance photographs taken after the town had been attacked by American and R.A.F. heavy bombers. The Americans bombed Augsburg in daylight on 25th February, and the R.A.F. the same night. The photographs show that not only has the original works been hit, but a neighbouring paper mill and two other cotton mills believed to have been taken over by M.A.N. have been blasted by high explosive bombs or damaged by fire. Nearly the entire plant has either been destroyed or very severely damaged. Fires started during the raids appeared to have got out of control and several of the largest workshops in the factory were gutted. It is estimated that the plant has suffered anything from 75 to 95 per cent. devastation.

A great part of the damage in the town seems to have been due to fire which burnt fiercely in the centre of it and spread out to the new industrial areas in the North and East. The majority of the factories in the East of the town were important mills engaged in cotton spinning and weaving. Nearly all of them have been destroyed or seriously damaged.

Another important factory in Augsburg, Martin Schmittner—makers of component parts for Me. 110s, has also been very badly damaged. In all, twenty-seven factories were hit during the two attacks.

(NOTE.—Since this account was written there have been many more air attacks on Germany, including some on a major scale on Berlin, with consequent increase of damage.—EDITOR.)

THE POST-WAR ARMY AND ITS DRESS

By CAPTAIN RUSSELL STEELE, late R.A.M.C.

THE two articles in the February number of the JOURNAL on the Post-War Organization and Dress of the Army raise some debatable points. I do not propose to comment on the ideas put forward for the organization of the Army after the War except to remark that, if one can judge by the feelings so admirably expressed by "Old Soldier" in his article on "Esprit-de-Corps," the regimental spirit is still—thank God—amazingly strong, and that to replace the Regiment and its esprit-de-corps, dress and tradition by the Division or Army would be a risky experiment.

As regards the Continental idea of a Metropolitan and Colonial Army, this is an intricate problem in the case of this country. The writer does not mention India, for which country we shall have—for a time at least—to find European regiments and their reliefs. Does he suggest going back to John Company's days and raising European regiments for India only? The author also states that war has shown that traditions of value are built on battle records and not on peculiarities of dress or drill; yet he admits that *new* badges and distinctive uniforms for different types of regiment will be of great assistance in the new formations suggested.

In the article on the uniform of the Army the writer states that it would be difficult to improve on our present battle-dress. He says that it calls for less criticism than any other uniform we possess. Yet he admits that its inadequacy is such that all ranks give a sigh of relief when they get a chance to change into mufti and notes that in the Western Desert "alteration" was the order of the day.

To many of us this so-called practical dress seems in reality unsuitable in many ways. First of all it is ugly and gives no feeling of pride or esprit-de-corps, and then again it gives no protection to the abdomen or kidney regions. The trousers are too baggy, and while the anklets are preferable to puttees they are too short and when wet get creased and produce friction and sores over the tendon at the back of the heel. The longer sailor's legging is preferable, or the gaiter of the United States Army. As for the beret, it gives no protection for the eyes or the nape of the neck and is un-English in appearance. The side-cap can at least be unhooked and pulled down. What is wrong with the soft peaked cap worn by the Guards for service wear?

Full Dress is deprecated by the writer, but it is well known that after the last war it was proposed that Full Dress should be re-issued to all ranks for ceremonial and walking out both for reasons of esprit-de-corps and recruiting. "Economy," however, was the order of the day and the issue stopped unfortunately at the Brigade of Guards, Household Cavalry and bands of other regiments. As a consequence the Service Jacket was smartened up and made unsuitable for "service" wear—hence the appearance of Battle Dress. These two orders of dress should be merged into one in the form of a jacket or blouse of the type worn by the Australians in the last war with a roll collar and ample protection below the waist.

Why deprive the Army of a distinctive Full Dress uniform embodying the traditional distinctions worn by the regiments concerned? Why compromise with a "Dress" uniform to be worn with a collar and tie? The latter articles of adornment are, as one knows from experience, a nuisance in the field and unsoldierly in appearance in any form of ceremonial uniform.

As for colour in a Full Dress kit, surely the red coat of the British Army—the King's Scarlet—is the correct wear for Line regiments of infantry, or green for Rifle regiments, with the appropriate colour for other arms. Cavalry regiments in the Royal Armoured Corps wish still to retain their regimental identities and distinctive uniforms. Khaki is universal for service wear, but in peace time one standard colour of whatever hue is surely carrying uniformity too far!

The Blue Patrol is smart enough for undress, but regimental piping down the trousers or overalls is essential. The plain blue sailor-like trousers made this dress somewhat unpopular before this war.

Mess Dress, it is agreed, should be retained. To do away, however, as he suggests, with distinctive facings and make the jacket of a universal colour is to reverse the pre-war official policy of re-authorizing distinctive colours of regimental facings.

A suitable form of Full Dress headgear is essential for ceremonial parades such as the author of the article considers may be necessary on certain occasions. For the infantry a light shako would be the ideal, as the undress peaked cap is not suitable on such occasions.

As for tropical kit, experience has shown that in a malaria-ridden country "shorts" are a menace. In India, where laundry can easily be done, white kit for summer is a pleasant change from drab khaki, as was the scarlet serge in the cold weather before 1914.

Lord Roberts has told us in his "Forty-one Years in India" how his heart was captured by the magnificent turn-out of the Bengal Horse Artillery when he landed in the East in '52. Their Roman-shaped helmets with red horsehair "tails" attached and their long jack boots and backs in breeches made such an appeal that he never rested until he obtained the much coveted Horse Artilleryman's "jacket." Rifleman Harris joined the old 95th because he was so struck by their smart devil-may-care appearance as they marched through the streets of Dublin's fair city.

To sum up: Battle Dress and Service Dress should be merged and worn in the style of the Australian blouse with roll collar. An appropriate Full Dress kit should be worn for ceremonial and walking out; this should not be a compromise Service Jacket. The Blue Patrol should be optional and should retain its smart stand-up collar as at present. Finally, officers should be granted an allowance to cover the cost of Full Dress or they should be able to obtain an issue of the same from Ordnance stores. Tradition still counts, and regimental distinctions of dress should not be cast into the limbo of the past.

CORRESPONDENCE

(Correspondence is invited on subjects which have been dealt with in the *Journal*, or which are of general interest to the Services. Correspondents are requested to put their views as concisely as possible, but publication of letters will be dependent on the space available in each number of the *Journal*.—EDITOR.)

ESPRIT-DE-CORPS

To the Editor of the R.U.S.I. Journal.

SIR,—The article on *Esprit-de-Corps* in the *Modern Army* by "Old Soldier" published in the February number of the *Journal* is a scathing attack on the staff who are described, among other things, as "regimental wreckers." It is obvious that the author has had a very long career as a regimental soldier and nothing else. It is quite clear, too, that he has never had the misfortune to be called on to deal with the problems which confront the "A" staff in a great war, and that he has absolutely no conception of them. At the same time, if he had taken the trouble to consult someone who has had to deal with these problems, even his own Officer in Charge of Records, he might have refrained from writing an article which can only have added to the considerable amount of misunderstanding which already exists in regard to these questions. Unfortunately it is impossible to answer "Old Soldier's" charges fully without going into details which cannot at present be discussed in public, but briefly the position is this :—

There are two factors which make our regimental system very difficult to maintain in any major war and particularly at the present time. They are :—

- (a) shortage of men, and
- (b) specialization.

As regards (a), the regimental system could be fully maintained only if we could afford to hold very much larger reserves of men for each regiment than we can actually afford to do. It is a question of a small number of active battalions with large regimental reinforcement units behind them, or a much greater number of active battalions (and we need every battalion we can get) with a pool of reinforcements which can be used economically. Naturally, in the national interest we must produce every active fighting battalion we can.

As regards (b), every arm in these days, including infantry, contains large numbers of tradesmen and specialists of different kinds and this very much complicates reinforcement problems. Other things being equal, units are always reinforced with men of their own regiment, but other things are not always equal by any means. It is better to reinforce a unit with men of another regiment than not to reinforce it at all, or to reinforce it with men of the wrong category.

This is no new problem. The regimental system has always broken down to a greater or less degree in a war of any magnitude. In at least one of the small wars in the XIXth Century the situation was so bad that the wearing of regimental facings was temporarily given up. Things are very much more complicated in these days than they were then.

Mistakes have no doubt been made; it would be strange if they had not, but the writer can assure "Old Soldier" from personal experience that the attitude of the Regular staff officer is very different to that which he pictures. Every effort is made in the face of very great difficulty to maintain the regimental system and *esprit-de-corps*, and the staff officers concerned may well feel a little hurt at finding themselves described as "regimental wreckers."

"MIDDLE-AGED SOLDIER."

17th April, 1944.

THE KING'S COMMISSION

To the Editor of the R.U.S.I. Journal.

SIR,—My attention has been drawn by Wing Commander Stanley Turner to the fact that, in my article on "The Dress of the British Army" in your February issue, I made what must appear to be a very sweeping recommendation on the subject of the King's Commission. I said, in effect, that non-combatant officers should not hold the King's Commission, but have a status similar to that of war correspondents.

In making this suggestion, I am afraid that I had in mind my own view of who is, or is not, a combatant officer, but I did not make this clear. To my way of thinking, a combatant officer is one who influences the battle *during its progress*. A medical officer, by this definition, is very much a combatant officer—and so are all those other officers engaged in the work of administration which may decide the success or failure of a battle or of a campaign. All these officers must have tactical knowledge in varying degrees, as well as technical knowledge. A non-combatant officer, on the other hand, is to my mind one who, once the battle begins, cannot influence it in any way.

My sole object in mentioning this matter was to draw attention to the fact that our habit of granting Commissions on a wide basis may lead to confusion, as in the example I quoted. And in making that point I do not, of course, in any way wish to underrate the valuable work performed by "non-combatant" officers.

R. J. M. DE BRETT,
Lieut-Colonel.

24th March, 1944.

DECORATIONS AND AWARDS

To the Editor of the R.U.S.I. Journal.

Sir,—You will perhaps excuse a non-member writing upon a subject which particularly concerns the United Services.

The occasional establishment of new decorations has led to a situation very ill-defined as to the degree of merit and kind of service performed by the recipient. A regulation of awards is long overdue and could be made with a little change to the existing order, as will be seen.

It was, I think, the late Sir Arnold Wilson who first suggested my first point: that all awards should be available to all Services, as are to-day the chief—the V.C. and D.S.O. The institution of the V.C. in 1856 set forth the principle that the award could be made to all ranks (and civilians) and this principle should be extended to all awards. Indeed, conferring one decoration upon officers and another on "other ranks" is an invidious distinction, the merit of a man's action having nothing to do with his rank. The establishment of the George Cross and George Medal followed a fairer method in making the Cross a higher honour than the Medal and this too could be applied to other decorations.

It appears to be necessary to distinguish between awards for meritorious or distinguished service and personal gallantry in a way not always done at present. To give an example, a captain of a ship or a battalion commander may sink an enemy or carry a position of immense importance through skill, coolness and determination but in circumstances that call for no special gallantry. On the other hand a man may fly an aircraft or storm a pill-box with extreme courage but with a result that has little effect on the outcome of the battle.

Taking these points into consideration we find that a more regular bestowal of the principal decorations can be achieved with only the following changes:—

1. A slight alteration in the regulations governing some awards.
2. The merging in a new Cross of the M.C. (established 1915) and D.F.C. (1919).
3. The merging in the C.G.M. (1855) of the D.C.M. (1854), M.M. (1916), and D.F.M. (1919).

All decorations may be awarded to any member of every Service.

FOR GALLANTRY

- (1) Victoria Cross (conditions of award unchanged).
- (2) A new Cross, named perhaps the Conspicuous Gallantry Cross, for conspicuous gallantry not justifying the award of the V.C.
- (3) Conspicuous Gallantry Medal, for conspicuous gallantry not justifying the award of the C.G.C.

FOR DISTINGUISHED SERVICE

- (1) Distinguished Service Order.
- (2) Distinguished Service Cross, awarded for distinguished service not justifying the award of the D.S.O.
- (3) Distinguished Service Medal for distinguished service not justifying the award of the D.S.C.

15th January, 1944.

P. CLISSOLD,
Lieut.-Commander, R.N.R.

THE ATLANTIC AIR TRAIN

To the Editor of the R.U.S.I. Journal.

SIR,—I have read with interest the article entitled "The First Atlantic Air Train" in your August 1943 issue, and feel that this is an opportune moment to bring to notice the considerable limitations which exist in the use of gliders.

It is a fundamental fact that it is always possible to build a single aeroplane that will carry any given load over any given distance with a considerably greater efficiency than can be achieved by an aeroplane towing a glider.

By "greater efficiency" we mean that the journey can be done either at a greater speed for the same fuel consumption, or at a lower fuel consumption for the same speed.

The only advantage to be gained from using a glider is therefore in either of the following cases:—

(a) Given an aeroplane with little or no cargo space, it can nevertheless be used for hauling cargo by hitching on a glider. Similarly, if the engine power is adequate, the cargo capacity of any plane may be increased by this means. In stipulating that the engine power must be adequate we mean that you cannot take an aeroplane loaded up to the maximum weight it will lift itself, and then hitch on a glider and still expect it to take off.

(b) For an operation necessitating landing of personnel or supplies in a confined space, at low landing speed and with possible loss of the aircraft, a glider is most suitable. These conditions will generally only apply to military operations or peacetime emergencies. The glider can be built cheaply and quickly, has a lower landing speed than a comparable aeroplane and is more simple to fly.

To do justice to a subject of this nature would require a lengthy article, and the right place for that would be an aeronautical journal. However, if I have succeeded in bringing to the notice of your readers some facts which are often ignored or overlooked, I shall have achieved my object.

Your readers may care to review the article to which I have referred in the light of the above comments. It is hard to see where gliders will find a place in the post-war world. In civilian airline traffic the operator who can carry his load with the greatest efficiency is bound to beat his competitors; and he will not win therefore by the use of gliders. Moreover, some of the difficulties actually experienced in the operation of gliders are well illustrated in the article.

8th February, 1944.

A. F. BRITTON,
Group Captain
Royal Air Force

GENERAL SERVICE NOTES

THE KING, who was accompanied by The Queen and The Princess Elizabeth, took the salute at a March Past of the parade of units of the Royal Navy, Army, Royal Air Force, Canadian Army, Merchant Navy and Civil Defence organizations held in London on 27th March in connection with "Salute the Soldier" Week.

WAR CASUALTIES

The Prime Minister, in the House of Commons on 4th April, gave the following figures of casualties to all ranks of the British Empire Forces during the first four years of the War (excluding deaths from natural causes) :—

	Killed*	Missing	Wounded	Prisoners of war	Total
United Kingdom†	120,958	29,469	93,622	143,947	387,996
Canada	9,209	2,745	3,383	4,360	19,697
Australia	12,298	11,887	29,393	20,760	74,338
New Zealand	5,622	884	11,315	7,896	25,717
South Africa... ..	3,107	279	6,473	13,966	23,825
India††	5,912	17,810	13,230	72,848§	109,800
Colonies	1,635	15,130	1,803	7,218	25,786
Total British Empire ...	158,741	78,204	159,219	270,995	666,159

* Including died of wounds or injuries.

† Including oversea personnel serving in these forces, in particular from Newfoundland and Southern Rhodesia.

†† Including casualties to the Hong-Kong and Singapore Royal Artillery.

§ Including 58,221 officers and other ranks missing but presumed to be prisoners of war.

NOTE.—(a) The casualty figures are net—that is, they exclude missing personnel who subsequently rejoined, and repatriated prisoners of war. (b) Prisoners of war include Service internees in neutral countries.

Mr. Churchill also gave the following figures of casualties to merchant seamen in British ships during the four years :—

Deaths (including deaths presumed in missing ships)	...	...	26,317
Internees	...	...	3,997
Total	...	...	30,314

These figures include nationals of the Dominions, India and the Colonies serving in British registered ships, but not losses in ships registered outside the United Kingdom.

Civilian casualties in the United Kingdom during the first four years of war (excluding casualties at sea) were :—Killed, 49,730; injured and detained in hospital, 59,371. Total, 109,101.

THE 1939-43 STAR

Further provisional instructions for the grant of the ribbon of the 1939-43 Star have been issued. In the notification of the institution of the 1939-43 Star, qualifications were authorized for the more straightforward cases, and it was then indicated that further details would be issued defining the operations participation in which would be considered in itself as a qualification for the Star.

Members of the United Kingdom, Dominion, Indian and Colonial, Naval, Army, and Air Forces, members of the Naval, Army, and Air Force Nursing Services and Women's Auxiliary Services and V.A.D. officers and members serving with the Naval, Army, and Air Forces, who have taken part in the undermentioned operations at any time between the appropriate dates will qualify, although they may not have completed six months' qualifying service. Members of the Navy must have served on shore or in the air during the operations; those who served afloat will count their services towards

the six months qualifying period. Members of the Army will qualify only if they have not already qualified for the Africa Star. Certain areas in the S.W. Pacific are still under consideration.

1. NORTH-WEST FRONTIER, INDIA, Feb. 3, 1940, to May 24, 1940; June 18, 1941, to Aug. 26, 1941; July 28, 1942, to Aug. 18, 1942.
2. NORWAY, April 14, 1940, to June 8, 1940.
3. FRANCE, May 10, 1940, to June 19, 1940.
4. BELGIUM, May 10, 1940, to June 19, 1940.
5. HOLLAND, May 12, 1940, to May 13, 1940.
6. GREECE and CRETE, Nov. 7, 1940, to May 31, 1941 (R.A.F.); March 10, 1941, to May 31, 1941 (Army).
7. LOFOTEN ISLANDS, March 4, 1941.
8. LUCANIA, Feb. 10, 1941.
9. SYRIA, June 8, 1941, to July 11, 1941.
10. SPITZBERGEN, Aug. 25, 1941, to Sept., 3, 1941.
11. HONG-KONG, Dec. 8, 1941, to Dec. 25, 1941.
12. MALAYA, Dec. 8, 1941, to Feb. 15, 1942.
13. LOFOTEN ISLANDS, Dec. 26, 1941.
14. VAAGSO, Dec. 27, 1941.
15. BURMA, Feb. 22, 1942, to May 15, 1942; Brigadier Wingate's Force, Feb. 7, 1943, to July 15, 1943.
16. BRUNEVAL, Feb. 27, 1942, to Feb. 28, 1942.
17. ST. NAZAIRE, March 27, 1942, to March 28, 1942.
18. HARDELOT, April 21, 1942, to April 22, 1942.
19. MADAGASCAR, May 5, 1942, to Nov. 5, 1942.
20. SPITZBERGEN, May 16, 1942, to Sept. 8, 1943.
21. BOULOGNE-LE TOUQUET, June 3, 1942.
22. ALEUTIAN ISLANDS (Air-Crew service only), June 3, 1942, to Aug. 16, 1943.
23. DIEPPE, Aug. 19, 1942.
24. SARK, Oct. 3, 1942, to Oct. 4, 1942.
25. SICILY, July 10, 1943, to Aug. 17, 1943.

SERVICE PAY

Details in increases in rates of pay and allowances and changes in war pensions for men in the Services and their dependents are given in a White Paper issued on 26th April (Cmd. 6521, Stationery Office, 2d. net).

The main features of the measures on which the Government have decided are as follows:—

(i) More rapid progress to the maximum pay of the rank for the non-tradesman private (which will be 5s. a day in future for the specially proficient soldier), with suitable adjustments in the other Services.

(ii) Where there is a child or children in the family, an increase from 25s. to 35s. in the minimum payment made to wives of ratings and other ranks.

(iii) Allowances for children of ratings and other ranks at a flat rate of 12s. 6d. a week instead of on a scale descending from 9s. 6d.

(iv) Increases in the allowances for wives and children of married officers with families and the extension of ante-natal allowances to officers.

(v) An increase from 18s. to 22s. in the minimum unit standard for the assessment of war service grants to families.

(vi) An increase in the minimum war pension for a widow with children (or over 40 or incapacitated) from 26s. 8d. a week to 32s. 6d. a week, together with certain increases in rates paid to widows with children (or over 40 or incapacitated) of officers in the lower ranks.

(vii) An increase in the rate of children's allowances for the children of deceased ratings and other ranks to a flat rate of 11s. a week instead of a descending scale from 9s. 6d.

NAVY NOTES

GREAT BRITAIN

H.M. THE KING

The King and Queen on 5th April drove from Buckingham Palace to the Admiralty, where, after making a tour of inspection, they had tea with the First Lord and Mrs. Alexander.

BOARD OF ADMIRALTY

The King has been pleased, by Letters Patent under the Great Seal, bearing date 20th March, 1944, to appoint the following to be Commissioners for Executing the Office of Lord High Admiral of the United Kingdom :—

The Right Hon. Albert V. Alexander, C.H.

Admiral of the Fleet Sir Andrew B. Cunningham, Bart., G.C.B., D.S.O.

Admiral Sir Charles E. Kennedy-Purvis, K.C.B.

Vice-Admiral Sir Algernon U. Willis, K.C.B., D.S.O.

Vice-Admiral Sir William F. Wake-Walker, K.C.B., C.B.E.

Vice-Admiral Arthur F. E. Palliser, C.B., D.S.C.

Rear-Admiral Denis W. Boyd, C.B., C.B.E., D.S.C.

Vice-Admiral Sir E. Neville Syfret, K.C.B.

Rear-Admiral John H. Edelsten, C.B.E.

Rear-Admiral Wilfred R. Patterson, C.B., C.V.O.

Victor A. G. A., Baron Bruntisfield, M.C.

Captain Richard A. Pilkington, M.C.

James P. L. Thomas, Esq.

Sir James Lithgow, Bart., M.C., T.D.

Sir Henry Vaughan Markham, K.C.B., M.C.

APPOINTMENTS

FOURTH SEA LORD.—It was announced on 22nd March that the King has approved the appointment of Vice-Admiral Arthur F. E. Palliser, C.B., D.S.C., to be a Lord Commissioner of the Admiralty and Chief of Supplies and Transport. He succeeded the late Vice-Admiral Frank Henderson Pegram, C.B., D.S.O., who died on 8th March.

It was also announced on 22nd March that Rear-Admiral C. E. Morgan, Rear-Admiral J. W. A. Waller, and Rear-Admiral H. J. Egerton had been given shore appointments abroad ; and that Rear-Admiral R. R. McGrigor had been appointed to command a cruiser squadron.

SOUTH ATLANTIC.—On 31st March, it was announced that the King had approved the appointment of Vice-Admiral Sir Robert L. Burnett, K.B.E., C.B., D.S.O., to be Commander-in-Chief, South Atlantic, in succession to Vice-Admiral Sir W. E. Campbell Tait, K.C.B., M.V.O.

The following were announced on 15th April :—

ORKNEYS AND SHETLANDS.—Vice-Admiral Sir Henry H. Harwood, K.C.B., O.B.E. to be Flag Officer Commanding Orkneys and Shetlands, in succession to Admiral Sir Lionel V. Wells, K.C.B., D.S.O. (retired).

ROSYTH DOCKYARD.—Rear-Admiral H. C. Bovell, C.B.E., D.S.O., to be Admiral Superintendent, H.M. Dockyard, Rosyth, in succession to Vice-Admiral Colin Cantlie, C.B., D.S.C. (retired).

MEDICAL DIRECTOR-GENERAL.—The appointment of Surgeon Vice-Admiral Sir Sheldon F. Dudley as Medical Director-General of the Navy has been extended for one year from 2nd July, 1944.

DIRECTOR OF NAVAL CONSTRUCTION.—It was announced on 31st January that Mr. Mr. Charles S. Lillicrap would shortly succeed Sir Stanley Goodall as Director of Naval Construction. Sir Stanley Goodall retained the position of Assistant Controller for Warship Production, which he had also held for the previous 15 months.

PROMOTIONS

Vice-Admiral (Acting Admiral) Sir Bruce Austin Fraser, G.C.B., K.B.E., is promoted to Admiral in H.M. Fleet (7th February).

Rear-Admiral Arthur F. E. Palliser, C.B., D.S.C., is promoted to Vice-Admiral in H.M. Fleet (7th February).

Rear-Admiral Geoffrey J. A. Miles, C.B., is promoted to Vice-Admiral in H.M. Fleet (9th March).

Vice-Admiral (Acting Admiral) Sir Bertram H. Ramsay, K.C.B., K.B.E., M.V.O. (retired), Allied Naval Commander, Expeditionary Force, was reinstated on the active list, to date 26th April, 1944, and promoted to the rank of Admiral, to date 27th April, 1944.

HONOURS AND AWARDS

Victoria Cross

On 23rd February, it was announced that the King had approved the award of the Victoria Cross for valour to—

Lieutenant Basil Charles Godfrey Place, D.S.C., R.N. (of East Meon, near Petersfield), and

Lieutenant Donald Cameron, R.N.R. (of Lee-on-Solent).

Lieutenants Place and Cameron were the commanding officers of two of H.M. midget submarines—X.7 and X.6—which, on 22nd September, 1943, carried out a most daring and successful attack on the German battleship "Tirpitz," moored in the protected anchorage of Kaafjord, North Norway. To reach the anchorage necessitated the penetration of an enemy minefield and a passage of 50 miles up the fiord, known to be vigilantly patrolled by the enemy and to be guarded by nets, gun defences, and listening posts, and this after a passage of at least 1,000 miles from their base. Having successfully eluded all these hazards and entered the fleet anchorage, Lieutenants Place and Cameron, with a complete disregard for danger, worked their small craft past the close anti-submarine and torpedo nets surrounding the "Tirpitz," and from a position inside these nets carried out a cool and determined attack.

While they were still inside the nets a fierce enemy counter-attack by guns and depth charges developed, which made their withdrawal impossible. Lieutenants Place and Cameron therefore scuttled their craft to prevent them falling into the hands of the enemy. Before doing so they took every measure to ensure the safety of their crews, the majority of whom, together with themselves, were subsequently taken prisoner. In the course of the operation these very small craft pressed home their attack to the full, in doing so accepting all the dangers inherent in such vessels and facing every possible hazard which ingenuity could devise for the protection in harbour of vitally important capital ships. The courage, endurance, and utter contempt for danger in the immediate face of the enemy shown by Lieutenants Place and Cameron during this determined and successful attack were supreme.

Distinguished Service Order

The following were awarded a Second Bar to the D.S.O. on the dates shown :—

Captain F. J. Walker, C.B., D.S.O., R.N., for gallant and distinguished services in the destruction of two U-boats by the "Starling," "Kite," "Wildgoose" and "Woodcock," patrolling in the North Atlantic (23rd February).

Captain P. W. Gretton, D.S.O., O.B.E., D.S.C., R.N., for outstanding skill and determination with the "Duncan," "Sunflower" and "Vidette" on convoy escort duty in successful attacks on U-boats (19th April).

UNITED STATES AWARD

Admiral H. R. Stark, Commander, United States Naval Forces in Europe, on 18th February presented the Legion of Merit to Rear-Admiral C. H. J. Harcourt, C.B., C.B.E., Naval Secretary to the First Lord of the Admiralty. The citation said :— "For exceptionally meritorious conduct of a high degree in the performance of outstanding services. Admiral Harcourt commanded the British cruiser squadron which provided close support for the landings in North Africa. His unfaltering support in the face of heavy odds did much to make possible the success of that operation."

RUSSIAN AWARDS

On 20th February it was announced in Moscow that the Order of Suvorov, 1st Class, had been awarded to Admiral Sir John Tovey, Commander-in-Chief at the Nore, and Admiral Sir Bruce Fraser, Commander-in-Chief, Home Fleet. Moscow radio stated that the award to Admiral Fraser was "for the successful execution of operations in bringing to port the Allied naval convoy carrying war material to Russia, as a result of which the German battleship "Scharnhorst" was sunk."

THE NAVY ESTIMATES

The Navy Estimates for 1944-45 were introduced in token form in the House of Commons on 7th March. Following is a summary of the speech of Mr. A. V. Alexander, First Lord of the Admiralty :—

The naval war in 1943 was marked by three peak dates on the road to victory : the first—a short period rather than a date—was the last ten days of March ; the second 11th September, when the major units of the Italian fleet anchored under the guns of the fortress of Malta ; the third, 26th December, when the Home Fleet destroyed the "Scharnhorst," which, following the attack on the "Tirpitz" by our midget submarines, was the last of the effective full-sized German capital ships.

The few days from 20th March were, perhaps, an even more important turning point, for merchant sinkings dropped headlong by two-thirds. Losses had fluctuated since about this lower rate, and at no time had approached the level they had reached before this dramatic change. Great actions, lasting as much as four days and nights, preceded this remarkable turn of the tide. Sometimes the enemy deployed as many as 30 U-boats against a particular convoy, and on our side the number of surface ships and aircraft would be of the same order.

Total sinkings of merchant ships for 1943 were little more than half of the working estimate we then thought it prudent to adopt. In 1941, one ship was lost out of every 181 which sailed ; in 1942, one out of every 233 ; in 1943, one out of every 344. Losses in convoys during the second half of last year were less than one in 1,000.

The change was due to a number of causes. Great credit was due to our scientists and technicians. Equally it was right to give prominence to the growth and efficiency of Coastal Command, with an increased proportion of very long range aircraft able to provide cover right across the Atlantic. Our surface forces had increased in number. The American forces had similarly expanded. Apart from the frigates, corvettes,

destroyers and sloops, the two Navies now possessed tens of escort carriers which could provide air cover for convoys at any point on their route.

Growth in air and surface escorts had enabled us to do three things. First, special groups had been formed to reinforce the escorts of convoys actually threatened with attack. Next, it had enabled us to take the offensive against U-boats in areas, principally the Bay of Biscay, through which they must maintain a dense traffic on their way to and from patrolling grounds. Thirdly, more training was possible, the composition of escort groups was much more stable, and they had developed the high degree of team work which produced astounding results.

The Second Escort Group under Captain F. J. Walker, C.B., D.S.O., had been outstanding, with 17 kills. Two others had been particularly successful—the Seventh, under Commander P. W. Gretton, D.S.O., and the Third, commanded throughout most of its history by the late Commander A. A. Tait, D.S.O., who was killed in action shortly after scoring his final success. Mention should also be made of headquarters of the Western Approaches Command under Admiral Sir Max Horton, responsible for training, development organization and operation of the anti-submarine forces.

Reduction in loss had been happily reflected in the Merchant Navy casualties. In 1943 the number of officers and men lost was roughly only half that in 1942. The number of special rescue ships, sailing with convoys for the sole purpose of rescuing survivors and giving medical attention, had been increased substantially.

A special scheme now enabled merchant ships to eliminate funnel smoke and thus reduce their chances of being detected. Over 600 sets of equipment had already been delivered and large scale arrangements made to train firemen in the best methods of stoking. Similarly, we had cut down losses from ordinary marine risks by 25 per cent. as a result of improved navigational aids.

No one should think that any relaxation was possible. The Germans had probably at least as many U-boats now as at the beginning of 1943. There was not the slightest evidence that the enemy had abandoned his intention to cripple our sea communications. He was still making every endeavour to improve the performance and equipment of U-boats, with greatly increased anti-aircraft fire and the new acoustic torpedo, and we had to expect further developments.

The net shipping gains did not mean that cargo space could be spared for less essential imports. All these profits must be firmly and ruthlessly ploughed back into the business. It was the policy of the United Nations to use these extra resources to accelerate the pace of the War.

After tributes to the wise and steadfast planning of the late First Sea Lord, Admiral of the Fleet Sir Dudley Pound, and the distinguished service of his successor, Admiral of the Fleet Sir Andrew Cunningham, the First Lord spoke of the work of the Navies, of the Dominions and of India and of all the Allies. He also referred to the hazardous work of the minesweepers, the expert courage of the submarines, the ceaseless vigil of the battleships and large carriers, and the skill and devotion of the Fleet Air Arm in the small carriers.

The output of warships in this country up to the end of January was only very slightly less than that of the last war, if allowance was made for the difference in the number of capital ships in hand at the outset. The output of merchant ships up to the end of the year appreciably exceeded the total output of the last war. The greatest advance in increased output was perhaps in the field of prefabrication and preassembly. In the most recent class of frigates, at least 80 per cent. of the structure had been prefabricated.

Again, with the help of the structural engineers, they had superimposed on the ordinary shipbuilding programme a vast programme of landing craft of all sizes and shapes, from small boats holding a few men to tank-carrying craft up to 200 ft. in length.

As regards promotion from the Lower Deck, in the Executive Branch, while there were only four such promotions in 1936 and 17 in 1938, the last three years had shown an average of 37 each year. A similar avenue of promotion had been opened up in the Fleet Air Arm, where a special scheme was started in 1941; and in the Accountant Branch, where the first promotions were made in 1942. Special attention was devoted during 1943 to the arrangements for selecting and training temporary reserve officers.

To-day the Fleet was stronger in relation to enemy naval strength than it had ever been since the fall of France brought us to the brink of disaster. The United Nations had regained much of the general freedom of movement throughout the seas of the world. In far Northern waters the naval situation had also improved. Since the commencement of the Russian convoys, 13 British warships had been sunk on this duty, and in some periods there were very considerable losses of merchant ships. Yet, over all, 88 per cent. of the cargoes had got through.

Axis hopes of limited but highly valuable trade between Japan and Germany had been largely extinguished. Of eleven blockade runners which set out during the past twelve months on the long, furtive voyage to Europe, only two reached port, and both were damaged.

The Navy's share in the struggle of the Nettuno beach-head alone had cost us two cruisers—the "Spartan" and "Penelope"; two destroyers—the "Janus" and "Inglefield"; and five major assault vessels. The total losses of the Royal Navy and the European Allied Navies in the Mediterranean since the start of the Sicilian campaign amounted to these two cruisers, one minelayer, ten destroyers, two submarines, and ten minor war vessels.

Our submarines are taking an increasing toll of Japanese shipping. When we bear down upon Japan for the final blow, our maritime forces will be more obviously than for generations past the corner-stone of our whole strategy. The Fleet Air Arm will be called upon to play a peculiarly vital part. The responsibilities resting upon the Navy will be enormous, but the merit and glory of the task still greater.

PERSONNEL

SEA MINING SERVICE.—On 9th March, it was announced that the following message had been communicated to all naval officers and men employed in the British sea mining service:—

"The Board of Admiralty has noted with much satisfaction the work of the naval and air forces engaged on minelaying operations in all theatres of war. Since the beginning of hostilities these forces, by unremitting effort, skill and devotion to duty, have rendered notable service both in offensive operations in enemy waters—as a result of which the enemy has suffered heavy losses—and in the efficient laying of the great minefields which protect our own coast. Their Lordships desire to express to all concerned their appreciation of the fine results achieved in minelaying operations, including those engaged on the vital duties connected with the design, trial, production, supply, and preparation of mines for service."

VOLUNTEERS FOR SMALL CRAFT.—Yachtsmen and others with motor-boat or steam-boat experience, either as seamen or engineers, were invited at the end of March to put their services at the disposal of the Royal Navy for short periods of duty during the next six months. This was an extension of a yachtsmen's emergency scheme already in existence. Volunteers were needed for harbour service craft and other small vessels to release trained ratings for general service. Each period of duty was to be of from three to four weeks' duration. No applications were to be accepted from members of the Merchant Navy.

GOODENOUGH PRIZE.—The Goodenough Memorial Prize for 1943 has been awarded to Sub-Lieutenant A. D. Casswell, R.N., H.M.S. "Grenville."

NEW CINEMA BRANCH.—In order to meet requirements for the display of instructional films in H.M. ships and naval establishments, and for the care and maintenance of cinematograph equipment, it has been decided to establish a new branch of naval personnel to be entitled the Cinema Branch. An Order in Council in the *London Gazette* on 28th March sanctions, for the period of the present emergency, the institution of the new branch of naval ratings, with the titles of cinema operator, leading cinema operator, P.O. cinema operator, and C.P.O. cinema operator. Rates of pay range from 4s. 6d. a day (5s. after six years man's service) for cinema operator to 9s. 3d. a day (9s. 9d. after three years, and with triennial increments of 6d. a day) for C.P.O. cinema operator. These rates are on the 1935 scale. Ratings of the Cinema Branch will not be eligible to receive the cinematograph allowance of 1s. a day instituted by Order in Council of 17th December, 1931.

AIR SAFETY EQUIPMENT.—By an Order in Council of 22nd October, 1937, sanction was given to the payment of an allowance of 3d. a day to naval ratings qualified in and employed on the care, packing and maintenance of parachutes. The range of safety equipment in use in the Air Arm of H.M. Navy has now increased so as to call for greater skill in repair and maintenance, and a higher rate of remuneration is provided for in a new order in the *London Gazette* on 28th March. This sanctions the institution of the non-substantive ratings of safety equipment assistant and safety equipment worker, with rates of pay of 3d. a day for the former; and for safety equipment workers, 9d. a day for able seamen and equivalent ratings and leading ratings, and 6d. a day for petty officers and chief petty officers.

SUBMARINE DETECTORS, COASTAL FORCES.—In the *London Gazette* on 25th January it was announced that the Admiralty deem it expedient to recruit men specially to carry out the duties of submarine detectors in coastal forces. Sanction was given for the institution, for the duration of the War, of the following non-substantive ratings, with the pay indicated:—Submarine detector (C.F.), 3d. a day; higher submarine detector (C.F.), 9d. a day for leading seamen and able seamen, and 6d. a day for petty officers.

MATERIAL

HUMAN TORPEDOES.—The use of "human torpedoes" in an attack on enemy shipping in Palermo Harbour in January, 1943, was made known on 19th April in a list of Admiralty awards to six officers and men. The human torpedo has a crew of two who ride astride it wearing diving suits. They dive under the target and, after setting the time fuse, fix the explosive charge to the bottom of the ship; then they navigate their headless craft out of the destructive radius of the explosion.

TRANSFER OF DESTROYERS.—The British destroyers "Boreas" and "Echo" were transferred in the first week of April to the Royal Hellenic Navy and renamed the "Salamis" and "Navarino" respectively. The "Echo" was formally handed over at Malta on 5th April.

CHRONOMETERS NEEDED.—The Admiralty wish to buy or borrow marine box chronometers for ships on war service, and appeal to owners of those which are not being used for navigational purposes to offer them in aid of the war effort. Communications to the Hydrographer of the Navy, Admiralty, Whitehall, S.W.1, should state the maker's name and the number of the chronometer, with the date of manufacture and a brief description. Chronometers should not be forwarded until the Admiralty has replied.

WOMEN'S ROYAL NAVAL SERVICE

The Duchess of Kent, Commandant, inspected the W.R.N.S. officers' training course and unit at the Royal Naval College, Greenwich, on 27th January, and W.R.N.S. units in the East Sussex area of the Portsmouth Command on 18th March.

ROYAL MARINES

Colonel Second Commandant T. H. Jameson, D.S.O., O.B.E., is promoted to be Acting Colonel Commandant (temporary Brigadier), to date 1st January, 1944.

Lieutenant-Colonel (acting Colonel Commandant, temporary Brigadier) W. B. F. Lukis, C.B.E., is promoted to be Acting Major-General, to date 15th April, 1943.

Lieutenant-Colonel (acting Colonel) V. D. Thomas, O.B.E., is promoted to be Acting Colonel Commandant (temporary Brigadier), to date 15th April, 1943.

DOMINIONS AND COLONIES**AUSTRALIA**

NAVAL CASUALTIES.—On 13th April, Mr. Makin, the Australian Navy Minister, stated that naval casualties up to 31st March were 2,422. Of these, 1,327 were killed, 230 wounded, 532 missing, and 333 prisoners.

CANADA

REVIEW OF PROGRESS.—In presenting the Navy Estimates, amounting to 410,000,000 dollars, in the House of Commons on 9th March, Mr. Angus Macdonald, Minister of National Defence for Naval Services, gave some figures of Canadian naval progress. Canadian naval personnel now numbered 80,000. While their main work lay in escorting convoys in the North Atlantic, Canadian warships were also operating in the Pacific, the Mediterranean, and the Indian and Arctic Oceans. Nearly 50,000 vessels had come under Canadian naval protection during the War. Fourteen warships had been lost, and naval casualties stood at over 1,300. Canadian shipyards had built about 100 warships for the Royal Navy, and a similar number were now on order. Canada had also built ships for the United States. There were 230 fighting ships and over 450 auxiliary vessels in the Canadian Navy. Bases at Halifax and Esquimalt had been greatly expanded, and 11 new bases developed on the east and west coasts in Newfoundland. In the coming year, the Canadian Navy would be developed from the "small ship navy" it had hitherto been. Two modern cruisers had been acquired from the Admiralty, and it was proposed to man two aircraft-carriers with Canadian seamen.

THE "CHEDABUCTO" LOST.—The loss of the minesweeper "Chedabucto" was announced on 6th February. She was beached after a collision at night with another vessel in the St. Lawrence. An outstanding exploit in the history of the "Chedabucto," one of the "Bangor" class of minesweepers, was the sinking by gunfire of a blazing ammunition ship in Halifax harbour, which saved Halifax from what might have been a disastrous explosion.

SOUTH AFRICA

PROPOSED NAVAL COLLEGE.—The establishment of a naval college at Saldanha Bay for the training of both naval and mercantile officers was recommended by a committee whose report was published on 4th February.

For many years the training of South African naval personnel has been carried out with the co-operation of the Royal Navy. This, the committee states, cannot be relied upon to continue indefinitely, as circumstances may arise after the War when it will not be necessary for Britain to maintain vessels based on South Africa for strategic reasons. The report shows South Africa's minimum naval needs after the War to be the provision of a skeleton naval force capable of training enough men for sixty small vessels, for the maintenance of equipment, for the defence of harbours, and for the ear-marking and outfitting of such vessels as are available and suitable as naval auxiliary vessels. The minimum number of ships in the peace-time establishment would be four frigate-type escort vessels, eight fleet minesweepers, six harbour defence motor launches, two boom vessels, one controlled minelayer, and one hydrographic surveying vessel. The committee recommends that in addition to personnel for these vessels, 50 officers and 500 men should be recruited to serve with the Royal Navy, so that a proportion of the forces could be given opportunities of service in other types of vessels.

ARMY NOTES

HIS MAJESTY THE KING

The King visited British troops on 12th, 23rd, 24th and 28th February; on 2nd, 16th, 17th, 22nd and 23rd March; and on 27th April.

He visited Canadian troops on 9th March and 25th April.

The Queen (Colonel-in-Chief) visited units of The Black Watch on 23rd February.

On 21st April, the eighteenth anniversary of her birthday, Princess Elizabeth, Colonel of the Grenadier Guards, received a present from the Regiment of a replica in miniature of the King's Colour of the 1st Battalion. The Princess's Colour will be mounted whenever she attends a parade of the Grenadier Guards or inspects any battalion.

Princess Elizabeth inspected a detachment of the Grenadier Guards on 23rd April.

The Duke of Gloucester (Colonel-in-Chief) visited units of the Rifle Brigade on 7th March, and of The Gloucestershire Regiment on 21st March. He visited an Infantry Training Centre in the Eastern Counties on 17th April.

The Duke and Duchess of Gloucester attended a parade of the Home Guard at Oundle on 2nd April.

The Duchess of Gloucester (Colonel-in-Chief) inspected units of the King's Own Scottish Borderers in February.

The Princess Royal (Colonel-in-Chief) inspected units of the Royal Corps of Signals in the Home Counties on 4th February, and in the Northern Command on 10th and 15th March. She visited troops in the Northern Command on 16th and 21st February.

The Princess Royal (Controller-Commandant) visited units of the Auxiliary Territorial Service in the South-Eastern Command on 1st February and in the Northern Command on 11th and 15th February. She visited the A.T.S. Wing at the Staff College on 3rd March, and later attended a party for members of the Canadian Women's Army Corps. She visited units of the A.T.S. in the Northern Command on 9th and 16th March, in the Scottish Command on 21st, 22nd, 23rd and 24th March; in the Anti-Aircraft Command on 25th March, and in the Western Command on 29th and 31st March. She was present at the A.T.S. conference in London on 4th April; inspected a passing out parade at an Auxiliary Territorial Service O.C.T.U. in the Home Counties on 5th April; was present at an A.T.S. conference at Northern Command Headquarters on 12th April; visited units of the A.T.S. in the South-Eastern Command on 20th April and in the Northern Command on 28th and 29th April. She visited a War Office Wireless (Mixed) Station on 28th April.

The King has been pleased to approve the following appointments:—

TO BE AIDES-DE-CAMP TO THE KING.—Colonel (temporary Brigadier) R. H. R. Parminster, C.B.E., D.S.O., M.C. (29th November, 1943); Lieut-Colonel H. M. Vatcher, M.C., E.D., Royal Militia of the Island of Jersey, with rank of Colonel in the Militia (20th July, 1943); Colonel I. C. Grant, C.B.E., D.S.O., (27th January, 1944).

TO BE HON. PHYSICIANS TO THE KING.—Colonel W. Ross Stewart, C.I.E., M.B., F.R.C.S., V.H.S., Indian Medical Service (31st August, 1943); Colonel (local Brigadier) G. Covell, C.I.E., M.D., V.H.S., Indian Medical Service (8th November, 1943).

TO BE REGIMENTAL COLONELS—of the 7th Gurkha Rifles, Indian Army, Major-General (temporary Lieut-General) W. J. Slim, C.B., C.B.E., D.S.O., M.C., Indian Army (31st March, 1944); of the 15th/19th (The King's Royal) Hussars, R.A.C., Field-Marshal Sir Philip Chetwode, Bt., G.C.B., O.M., G.C.S.I., K.C.M.G., D.S.O., D.C.L.

HONOURS AND AWARDS

Victoria Cross.—The King has approved the award of the Victoria Cross to:—

(a) Captain (now acting Major) P. Triquet, Royal 22nd Regiment, Canadian Army—for magnificent courage, superb leadership and example in Italy on 14th December, 1943.

(b) Sergeant T. C. Derrick, D.C.M., Australian Military Forces—for most conspicuous courage, outstanding leadership and devotion to duty during the final assault on Sattelberg (New Guinea) on 24th November, 1943.

(c) Captain (temporary Major) W. P. Sidney, Grenadier Guards—for superb courage and utter disregard of danger in action in the Anzio beach-head in February, 1944.

(d) Lieutenant A. G. Horwood, D.C.M., The Queen's Royal Regiment, attached The Northamptonshire Regiment (posthumous)—for magnificent bravery, leadership and devotion to duty in Burma in January, 1944.

The following award was announced on 10th February in recognition of gallant and distinguished services in the field:—

K.B.E.—Major-General (temporary) E. M. Cowell, C.B., C.B.E., D.S.O., T.D., M.D., F.R.C.S., late R.A.M.C.

Among awards announced on 23rd March in recognition of gallant and distinguished services in Sicily were:—

K.B.E.—Major-General Francis, Baron Rennell, C.B.

C.B.—Major-General W. R. C. Penney, C.B.E., D.S.O., M.C.

APPOINTMENTS

The following appointments have been announced:—

To be G.O.C.-in-C. Persia and Iraq Command.—Lieut-General Sir Arthur F. Smith, K.B.E., C.B., D.S.O., M.C.

To be G.O.C.-in-C. Eastern Command.—Lieut-General Sir Kenneth A. N. Anderson, K.C.B., M.C.

To be G.O.C.-in-C. Southern Command.—Lieut-General W. D. Morgan, C.B., D.S.O., M.C.

To be G.O.C. London District.—Lieut-General Sir Henry C. Loyd, K.C.B., D.S.O., M.C.

To be Governor and Commander-in-Chief, Gibraltar.—Lieut-General Sir T. Ralph Eastwood, K.C.B., D.S.O., M.C.

To be Head of the British Service Mission in Moscow.—Lieut-General (local) M. B. Burrows, C.B., D.S.O., M.C.

To be G.O.C.-in-C. Northern Command.—Lieut-General Sir E. L. Morris, K.C.B., O.B.E., M.C.

To be Chief of the General Staff, India.—Lieut-General J. G. des R. Swayne, C.B., C.B.E.

To be G.O.C.-in-C. South-Eastern Command.—Lieut-General E. C. A. Schreiber, C.B., D.S.O.

To be G.O.C.-in-C. Western Command.—Major-General D. G. Watson, C.B., C.B.E., M.C.

Special appointments in India.—Major-General B. O. Hutchison, C.B., C.B.E., with acting rank of Lieut-General (9th January, 1944); Major General A. V. Hammond, A.D.C., I.A. (6th January, 1944); Lieut-Colonel F. A. M. B. Jenkins, D.S.O., O.B.E., M.C., I.A., with acting rank of Major-General (12th January, 1944); Major-General R. B. Deedes, C.B., O.B.E., I.A., with acting rank of Lieut-General (11th March, 1944).

PROMOTIONS

The following promotions have been announced :—

Lieut.-Generals.—The following Major-Generals (acting Lieut.-Generals) to be temporary Lieut.-Generals :—Sir Richard L. McCreery, K.C.B., D.S.O., M.C. (2nd February, 1944) ; H. E. de R. Wetherall, C.B., D.S.O.; O.B.E., M.C. (24th January, 1944) ; G. C. Bucknall, C.B., M.C. (11th March, 1944) ; R. MacK. Scobie, C.B., C.B.E., M.C. (22nd March, 1944) ; G. A. P. Seones, C.S.I., D.S.O., O.B.E., M.C., I.A. (1st August, 1943).

The following Major-Generals to be acting Lieut.-Generals :—J. G. W. Clark, C.B., M.C. (25th January, 1944) ; D. G. Watson, C.B., C.B.E., M.C. (19th March, 1944).

The following Lieut.-Colonel (acting Major-General) to be acting Lieut.-General :—S. C. Kirkman, C.B.E., M.C. (20th January, 1944).

To be local Lieut.-General :—Major-General M. B. Burrows, C.B., D.S.O., M.C. (14th February, 1944).

Major Generals.—The following Colonels (temporary Major-Generals) to be Major-Generals :—G. C. Bucknall, C.B., M.C. (21st December, 1943) ; C. M. P. Durnford, C.I.E., I.A. (11th January, 1944) ; J. G. Bruce, D.S.O., M.C., I.A. (15th February, 1944).

The following Colonels (acting Major-Generals) to be temporary Major-Generals :—H. W. V. Stewart, C.B.E., D.S.O., A.D.C. (15th January, 1944) ; J. A. Sinclair, O.B.E. (15th January, 1944) ; E. Hakewill-Smith, M.C. (26th December, 1943) ; C. McV. Gubbins, C.M.G., D.S.O., M.C. (21st December, 1943) ; K. N. Crawford, M.C. (12th December, 1943) ; A. V. Anderson, M.B.E. (20th December, 1943) ; G. W. E. J. Erskine, C.B., D.S.O. (24th January, 1944) ; R. F. S. Denning (11th February, 1944) ; J. F. Hare, D.S.O. (16th February, 1944) ; R. Gurney, C.B. (23rd February, 1944) ; J. F. M. Whiteley, C.B., C.B.E., M.C. (20th February, 1944) ; D. R. Duguid, M.B.E., A.M.I.E.E. (5th February, 1944) ; G. F. Watson, D.S.O., O.B.E. (2nd March, 1944) ; A. J. K. Pigott, C.B.E. (2nd March, 1944) ; T. N. F. Wilson, D.S.O., M.C. (3rd March, 1944) ; R. K. Hewey, C.B.E., M.C. (8th March, 1944) ; D. Stuart, C.I.E., O.B.E., I.A. (16th November, 1943) ; W. H. Oxley, C.B.E., M.C. (28th March, 1944) ; E. T. L. Gurdon, C.B.E., M.C. (1st April, 1944).

The following War Subs. Lieut.-Colonels (acting Major-Generals) to be temporary Major-Generals :—Sir Brian H. Robertson, Bt., C.B., C.B.E., D.S.O., M.C. (28th January, 1944) ; F. W. Festing, D.S.O., (28th November 1943) ; W. S. Tope, C.B.E., A.M.I.Mech.E. (28th January, 1944) ; C. M. Smith, O.B.E., M.C., A.M.I.Mech.E. (15th March, 1944).

The following Colonels (temporary Brigadiers) to be acting Major-Generals :—P. G. S. Gregson-Ellis, O.B.E. (23rd January, 1944) ; G. P. Walsh, C.B.E., D.S.O. (29th December, 1943) ; C. M. F. White, C.B.E., D.S.O., (31st January, 1944) ; W. A. M. Stawell, M.C. (27th November, 1943) ; M. E. Dennis, C.B.E., D.S.O., M.C. (21st February, 1944) ; A. W. Lee, M.C. (10th February, 1944) ; L. O. Lyne, D.S.O. (29th March, 1944).

The following Lieut.-Colonels (temporary Brigadiers) to be acting Major-Generals :—K. W. D. Strong, O.B.E. (1st December, 1943) ; M. W. A. P. Graham, O.B.E., M.C. (15th January, 1944) ; F. W. de Guingand, C.B., C.B.E., D.S.O. (1st December, 1943) ; R. E. Urquhart, D.S.O. (10th January, 1944) ; F. St. D. B. Lejeune (22nd February, 1944) ; D. W. Reid, C.B.E., D.S.O., M.C., I.A. (14th February, 1944) ; G. N. Russell, C. B. E. (18th January, 1944).

THE ARMY ESTIMATES

The following is a summary of certain portions of the speech made by Sir J. Grigg, Secretary of State for War, when introducing the Army Estimates in the House of Commons on 2nd March.

ORGANIZATION.—At home the Army had been reorganized to provide the greatest possible striking force together with the necessary reserves and base organization to support it.

MAN-POWER.—The problems of man-power fell into two broad classes: those concerned with the size of the Army's allotment and those concerned with the use of the man-power when allotted.

As to the first, this country had probably mobilized its man-power more highly than any other belligerent and certainly more highly than in the last war. None of the three Services could be fully satisfied and there was a constant competition between them for man-power. The competition had, of course, to be settled by the War Cabinet. Personally he had often thought that the Army had taken third place in these judgments. Anyhow, it was undeniable that the Army had definitely made a later start in rearmament than the other two Services, largely due to the view that this country would not need to undertake a large continental commitment.

As for the use the Army made of its *ex-hypothesi* inadequate allotment, the very inadequacy of the allotment generated a constant pressure to prune and save. In the realm of equipment they were constantly reducing their demands on the Ministry of Supply and they had indeed in recent months released many tens of thousands of their workpeople. The bulk of the men and women released had gone to increase the resources of the Ministry of Aircraft Production. There were probably as many workpeople engaged on making heavy bombers as on the whole Army programme.

CONVERSION OF UNITS.—A volume of experience had led to considerable changes not only in particular types of unit but also in the number of each type of unit required to make up the Army as a whole. Owing to the shortage of man-power it had unfortunately been necessary to do a great deal of converting units or disbanding them and reposting and retraining the individual soldiers. The traditional ideal, which ought to be preserved as far as possible, was to employ the great bulk of the men in the Army in their county regiments. But breaches in the tradition had been inevitable. It was settled policy, however, that no pre-war units, whether Regular, Territorial or Supplementary Reserve should be finally disbanded. When they had been converted to other arms they retained their identity by including their old title in their new designation. When it had been necessary to break up a pre-war Territorial unit in order to make men available for other arms, the unit was not disbanded but placed in abeyance in order to make it easy to resuscitate it in the future.

RATIO OF FIGHTING TROOPS.—In the Army nearly two-thirds of the total strength are fighting troops and rather more than one-third servicing troops. Constant efforts are being made to increase the proportion of combatant to non-combatant troops, but no considerable change in the present proportion can be foreseen.

THE POST-WAR ARMY.—The question of the post-war Army had been under examination in the War Office for a long time. In examining the problem there were many incalculable factors. But it might be taken as certain that the hard core of the Army would be a professional organization, having behind it considerable reserves. One of the first necessities was that the Army of the future should be a profession which attracted the best elements of the population.

TRIBUTE TO THE ARMY.—In concluding his speech, Sir J. Grigg expressed his complete confidence in the Army—confidence which rested upon the faith that this Army which came out of great tribulation is the best we have ever had. "Far too little is said in praise of the British soldier."

GENERAL

WOUND STRIPES AND CHEVRONS.—It was announced in February that the King had approved the institution of wound stripes and chevrons to be worn in recognition of services undertaken during the present war since September 3, 1939. These wound stripes and chevrons are distinctions to be worn in respect of service since the declaration of war, and are not to be regarded in the nature of a reward.

Subject to fulfilling the conditions laid down, the following categories will be eligible for the distinctions:—All officers (including women officers), other ranks, and auxiliaries

of the British, Dominion, Indian, and Colonial forces; nursing officers; members of the Home Guard; and officers and members of Voluntary Aid Detachments. There will be no posthumous issues.

Wound stripes, denoting wounds or injuries sustained in the present war, will be of narrow gold braid and $1\frac{1}{2}$ in. in length. They will be worn vertically on the left forearm. One stripe will be worn in respect of each occasion on which the individual is recorded as wounded in the records of the War Office Casualty Branch, which will constitute the authority for wearing the stripe. Self-inflicted wounds will not qualify for an issue.

A single wound stripe of red rayon (lustrous) braid will also be worn to denote wounds sustained in previous wars irrespective of the number of wounds. It will also be $1\frac{1}{2}$ in. in length and will be worn on the left forearm. Those entitled to both red and gold stripes will wear the red braid stripe to the rear of the first gold stripe.

One chevron will be issued for each completed year of service in the present war, recipients becoming eligible for the first chevron at the end of the first completed year of service and so on. The chevrons will be printed in red on a khaki background, the arms being 3-16 in. in width and $\frac{3}{4}$ in. in length.

Persons who by reasons of their service have become entitled to wear wound stripes and/or chevrons may, at their own option, continue to wear them on plain clothes after cessation of military service or on relegation to the reserve.

Ex-officers and ex-Service men and women, including those relegated to the reserve or placed on the unemployment list, are also entitled to a service chevron for each complete year of service in the Army, Home Guard, A.T.S., V.A.D., or as nursing officers during the present war. They will also be entitled to one gold wound stripe for each wound or injury received as a result of enemy action while on duty in the forces mentioned. In addition, a single red wound stripe will be issued to denote a wound or wounds received in previous wars. This red stripe will be issued only to those ex-officers and ex-Service men and women who have served in the forces mentioned in the present war since September 3, 1939. Both wound stripes and chevrons may be worn on plain clothes.

SANDHURST.—General Eisenhower, Supreme Allied Commander, visited Sandhurst on 11th March to take the passing out parade of cadets who have qualified as officers of the Royal Armoured Corps.

REGIMENTAL EXPLOITS.—Short accounts of the exploits of various units and formations were published in *The Times* on the following dates:—

1st February	...	The Royal Fusiliers.
2nd February	...	The Royal West Kent Regiment.
3rd February	...	The Royal Irish Fusiliers.
4th February	...	The York and Lancaster Regiment.
16th February	...	The Green Howards.
24th February	...	The Wiltshire Regiment.
26th February	...	The Sherwood Foresters.
29th February	...	Grenadier Guards and other Guards battalions.
2nd March	...	The Hampshire Regiment and Seaforth Highlanders.
4th March	...	The Northamptonshire Regiment.
7th March	...	1st Regiment, Reconnaissance Corps.
9th March	...	3rd Hussars, R.A.C.
10th March	...	The Warwickshire Yeomanry.
13th March	...	The Loyal Regiment.

21st March	...	Grenadier, Coldstream and Scots Guards.
23rd March	...	The Hampshire Regiment.
25th March	...	The Sherwood Foresters and King's Royal Rifle Corps.
29th March	...	Scots Guards.
1st April	...	Welsh Guards and King's Shropshire Light Infantry.
6th April	...	Irish Guards.
14th April	...	The Buffs, Leicestershire Regiment and London Scottish.
18th April	...	The Royal West Kent Regiment.
21st April	...	The Cheshire Regiment.
28th April	...	The Cameronians and North Staffordshire Regiment.

OLD HOME GUARD MEDAL.—According to *The Times* of 18th March, Major F. C. Poulton, late of the R.E.M.E., has found a medal struck in the reign of George III which was presented to his great-great-grandfather, Mr. W. F. Poulton, of Westbury-on-Trym, Bristol, in recognition of service in the Royal Bristol Volunteers Home Guard formed in 1797 on the threat of invasion by Napoleon.

CIVILIAN AIR RAID CASUALTIES.—The following figures show civilian casualties due to air raids on the United Kingdom during 1944 :—

			Killed	Injured and detained in hospital	Total
January	...	...	107	207	377
February	...	...	961	1,712	2,673
March	...	...	279	633	912

The casualties for February were the highest monthly total since May, 1941.

CANADA

THE PRINCESS ROYAL (Colonekin-Chief) inspected a unit of the Royal Canadian Corps of Signals on 1st February.

VICTORIA CROSS.—The Victoria Cross has been awarded to Captain P. Triquet, Royal 22nd Regiment, Canadian Army. (see page 188.)

APPOINTMENTS.—Lieut-General H. D. G. Crerar, D.S.O., has been appointed to command the First Canadian Army.

Lieut-General E. W. Sanson, D.S.O., has relinquished command of a Canadian corps owing to ill-health.

Major-Generals G. G. Simonds and E. L. H. Burns have been appointed to command Canadian corps with acting rank of Lieut-General.

Brigadier C. Foulkes has been appointed to command a Canadian division with acting rank of Major-General.

AUSTRALIA

VICTORIA CROSS.—The V.C. has been awarded to Sergeant T. C. Derrick (see page 188.) This is the eleventh Victoria Cross to be awarded to members of the Australian Imperial Forces in this war.

APPOINTMENTS.—The following appointments were announced in Canberra on 28th March :—

Lieut-General Sir Leslie Morshead, K.B.E., C.M.G., D.S.O., to be commander of the Second Australian Army and temporarily in command of Headquarters, New Guinea.

Lieut-General V. A. H. Sturdee, C.B.E., D.S.O., to command the First Australian Army.

Major-General F. H. Berryman to command the II Australian Corps and Major-General S. G. Savige, C.B., C.B.E., D.S.O., M.C., to command the I Australian Corps, both with temporary rank of Lieut-General.

INDIA

INDIAN SOLDIER'S PAY.—Further increases in pay for sepoys were announced in Delhi on 7th March. The general effect is that, including his deferred pay which amounts to three rupees monthly, a combatant Indian soldier in the field who has completed one year's service will now receive in all 37½ rupees (about £2 16s.) monthly, which compares with 22½ rupees before the war. When serving overseas the soldier receives also 7 rupees monthly expatriation allowance.

INDIAN OFFICERS.—General Sir Claude Auchinleck, Commander-in-Chief, India, answering in the Council of State on 31st March a member who had advocated that more of the higher ranks of the Army should be filled by Indians, said that the composition of the Army after the War could not be settled in detail now, but the ratio of Indian to British officers had steadily increased during the War. Whereas in 1939 the proportion of British officers to Indian was 9.5 to one, it was now (excluding from consideration British Service officers temporarily attached to the Indian Army as a war measure) 1.3 British to one Indian.

He was prepared to take as many Indians as he could get, provided that they were of the right stamp and fit to be leaders of men. Indian soldiers were among the best in the world, and their officers must be worthy of them. The Army, however, was not getting men of the standard required for officers. He had confirmed that himself in the course of a visit to a selection board at Dehra Dun, where he had seen and talked with candidates and had been much disappointed with their quality. He indicated that he was taking measures to get a better type of man.

General Auchinleck said that during visits to many units of the Indian Army in various parts of the country he had been impressed by their enthusiasm and discipline and anxiety to make good. The bearing was that of free men anxious to do their duty by their country and he was proud of them.

POLAND

It was announced on 16th February that the II Polish Corps under General Anders was fighting in Italy. The Carpathian and Kresowa Divisions form part of the Corps; these divisions consist of men who escaped after the German invasion of Poland. The II Polish Corps is included in the British Eighth Army.

AIR NOTES

ROYAL AIR FORCE

H.M. THE KING

The King and Queen on 7th February visited the Headquarters of Bomber Command. They were received by Air Chief Marshal Sir Arthur Harris, Air Officer Commanding-in-Chief, who presented members of his staff, including Air Vice-Marshal Sir Robert Saundby, Deputy A.O.C.-in-C.

On 10th February, the King and Queen visited a station of the 8th United States Army Air Force. They were received by Major-General Doolittle, who led the United States bombers to Tokyo. Their Majesties also visited Pathfinder stations of the R.A.F. At one they were received by Air Vice-Marshal D. C. Bennett, A.O.C., Pathfinders. At another, manned by the Royal Canadian Air Force, they were met by Air Vice-Marshal Anderson, Deputy A.O.C.-in-C. of the R.C.A.F. Oversea.

It was announced on 26th February that Group Captain (Acting Air Commodore) George R. Beamish, C.B.E., had been appointed an Air Aide-de-Camp to the King.

APPOINTMENTS

MALTA.—On 12th February, it was announced that Acting Air Vice-Marshal Archibald H. Wann had been appointed Air Officer Commanding, R.A.F., Malta, in succession to Air Marshal Sir Keith Rodney Park, K.B.E., C.B., M.C., D.F.C., recently appointed A.O.C.-in-C., R.A.F., Middle East.

BALLOON COMMAND.—On 21st February, it was announced that Air Commodore William C. C. Gell, D.S.O., M.C., had been appointed Air Officer Commanding, Balloon Command, and to be Acting Air Vice-Marshal.

BOMBER COMMAND.—The following appointments were announced on 22nd February :—

Air Vice-Marshal Robert D. Oxland, C.B., C.B.E., to a special appointment in Bomber Command.

Air Vice-Marshal Hugh S. P. Walmsley, C.B.E., M.C., D.F.C., to be Senior Air Staff Officer, Bomber Command.

Air Commodore John Astley Gray, C.B.E., D.F.C., G.M., to be Air Officer Commanding a group in Bomber Command, and to be Acting Air Vice-Marshal.

GIBRALTAR.—On 7th March, it was announced that Air Vice-Marshal William Elliot, C.B., C.B.E., D.F.C., had been appointed Air Officer Commanding, R.A.F. Station, Gibraltar, in succession to Air Vice-Marshal Sturley Philip Simpson, C.B.E., M.C., who was appointed Air Officer Commanding a group in Coastal Command.

MEDITERRANEAN.—On 9th March, it was announced that Air Vice-Marshal John H. D'Albiac, C.B., D.S.O., had been appointed Deputy Commander, Mediterranean Allied Tactical Air Force.

AIRCRAFT PRODUCTION.—On 17th March, it was announced that Air Vice-Marshal Hugh H. M. Fraser, C.B., had been appointed Director-General of Repair and Maintenance at the Ministry of Aircraft Production.

FLYING TRAINING.—On 2nd April, it was announced that Acting Air Vice-Marshal Clarence E. W. Lockyer had been appointed to be Air Officer Commanding a Flying Training Group.

The following were announced on 18th April:—

SOUTH-EAST ASIA.—Air Vice-Marshal Alan Lees, C.B., C.B.E., D.S.O., A.F.C., to be Air Officer in Charge of Administration, Air Command, South-East Asia, and to be Air Marshal. Air Vice-Marshal Albert Durston, C.B., A.F.C., to be Air Officer Commanding a Group in South-East Asia Air Command.

DESERT AIR FORCE.—Air Vice-Marshal William Forster Dickson, D.S.O., O.B.E., A.F.C., to be Air Officer Commanding, Desert Air Force.

WASHINGTON.—Air Vice-Marshal Robert Peel Willock, C.B., to be Deputy Head of the R.A.F. Delegation, Washington.

IRAQ AND PERSIA.—Air Commodore Alexander Paul Davidson, C.B.E., to be Air Officer Commanding, Iraq and Persia, and to be Air Vice-Marshal.

The following was announced on 28th April:—

ITALY.—Air Vice-Marshal W. A. Bowen-Buscarlet, C.B.E., D.F.C., to be Head of the Sub-Commission of Allied Military Control Commission to Italy, and in charge of operational control of Italian Air Force units.

The following were announced on 5th May:—

SOUTH-EAST ASIA.—Air Vice-Marshal Thomas Melling Williams, C.B., O.B.E., M.C., D.F.C., to be Deputy Commander, Headquarters, Eastern Air Command (Air Command, South-East Asia).

Air Vice-Marshal Gerald Ernest Gibbs, M.C., to be Senior Air Staff Officer, Headquarters, 3rd Tactical Air Force, Air Command, South-East Asia.

CHAPLAIN-IN-CHIEF.—On 31st March, the appointment was announced of the Rev. John Arthur Jagoe, M.A., K.H.C., to be Chaplain-in-Chief to the R.A.F., with effect from 10th April, 1944, in succession to the Rev. Maurice Henry Edwards, O.B.E., B.A., K.H.C., who retired from the Royal Air Force on that date.

PROMOTIONS

The following have been announced:—

Air Vice-Marshal Sir Keith R. Park, K.B.E., C.B., M.C., D.F.C., granted acting rank as Air Marshal (14th January, 1944).

Air Commodore M. L. Taylor, C.B.E., A.F.C., granted acting rank as Air Vice-Marshal (17th November, 1943).

Air Commodore (Technical Branch) J. R. Cassidy, granted acting rank as Air Vice-Marshal (30th December, 1943).

Air Commodore A. H. Wann, granted acting rank as Air Vice-Marshal (6th February, 1944).

Air Commodore (Technical Branch) E. J. Cuckney, C.B.E., D.S.O., granted acting rank as Air Vice-Marshal (1st February, 1944).

Group Captain H. Broadhurst, D.S.O., D.F.C., A.F.C., granted acting rank as Air Commodore (war substantive), 31st January, 1944).

Air Commodore W. C. C. Gell, D.S.O., M.C., Auxiliary Air Force, Balloon Branch, granted acting rank as Air Vice-Marshal (1st February, 1944).

Air Commodores to be Air Vice-Marshals (temporary) (1st December, 1943).—B. McEntegart, C.B.E., H. S. Kerby, C.B., D.S.C., A.F.C. (Acting Air Vice-Marshal), A. P. M. Sanders, C.B.E. (Acting Air Vice-Marshal), E. A. B. Rice, C.B., C.B.E., M.C. (Acting Air Vice-Marshal), R. Harrison, C.B.E., D.F.C., A.F.C. (Acting Air Vice-Marshal), A. C. Collier, C.B., C.B.E. (Acting Air Vice-Marshal), W. F. Dickson, C.B., D.S.O., O.B.E., A.F.C. (Acting Air Vice-Marshal), W. Elliot, C.B., C.B.E., D.F.C., J. W. Baker, C.B., M.C., D.F.C. (Acting Air Vice-Marshal), H. S. P. Walmsley, C.B.E., M.C., D.F.C. (Acting Air Vice-Marshal), A. B. Ellwood, C.B., D.S.C. (Acting Air Vice-Marshal).

Group Captains to be Air Commodores (temporary), (1st December, 1943).—W. E. G. Bryant, M.B.E., E. I. Bussell, P. R. T. J. M. I. C. Chamberlayne, A.F.C., C. G. Wigglesworth, A.F.C., G. G. Banting, C.B.E., A. M. Wray, D.S.O., M.C., D.F.C., A.F.C., N. L. Desoer, C. A. Bouchier, C.B.E., D.F.C., G. S. Hodson, C.B.E., A.F.C., L. F. Pendred, M.B.E., D.F.C., B. E. Embry, D.S.O., A.F.C., A.D.C. (Acting Air Vice-Marshall), H. A. Haines, C.B.E., D.F.C., J. N. Boothman, A.F.C., R. L. Ragg, A.F.C., W. L. Dawson, C.B.E., G. Harcourt-Smith, C.B.E., M.V.O., G. H. Mills, D.F.C.

TECHNICAL BRANCH.—Air Commodore (Acting Air Vice-Marshall) to be Air Vice-Marshall (temporary), (1st December, 1943).—G. G. Dawson, C.B., C.B.E.

Group Captains to be Air Commodores (temporary), (1st December, 1943).—H. E. Forrow, O.B.E., K. L. Boswell, C.B.E., F. E. Vernon, O.B.E., E. H. Richardson, E. B. Addison, C.B.E., R. G. Hart, O.B.E., M.C.

ACCOUNTANT BRANCH.—Group Captains to be Air Commodores (temporary), (1st December, 1943).—P. J. Wiseman, H. F. Fuller.

AUXILIARY AIR FORCE—BALLOON BRANCH.—Group Captain to be Air Commodore (temporary) (1st December, 1943).—W. C. C. Gell, D.S.O., M.C., T.D., D.L.

MEDICAL BRANCH.—Air Commodore D'A. Power, M.C., granted acting rank as Air Vice-Marshall (17th January, 1944). Group Captain (Acting Air Commodore), A. F. Rook, O.B.E., granted acting rank as Air Vice-Marshall (16th January, 1944).

Air Commodore J. A. Gray, C.B.E., D.F.C., G.M., granted acting rank as Air Vice-Marshall (8th February, 1944).

MEDICAL BRANCH.—Air Commodore T. J. Kelly, M.C., granted acting rank as Air Vice-Marshall (21st February, 1944).

Air Commodores (temporary Air Vice-Marshals) to Air Vice-Marshals.—L. D. D. McKean, C.B., O.B.E. (6th November, 1943), R. P. Willock, C.B. (1st February, 1944), M. Henderson, C.B., C.I.E., D.S.O. (18th February, 1944).

Group Captains (temporary Air Vice-Marshals) to Air Commodores (1st December, 1943).—M. B. Frew, C.B., D.S.O., M.C., A.F.C., R. V. Goddard, C.B., C.B.E. B. McEntegart, C.B.E., H. S. Kerby, C.B., D.S.C., A.F.C.

Group Captains (temporary Air Commodores) to Air Commodores (1st December, 1943).—M. Thomas, C.B.E., D.F.C., A.F.C., T. W. Elmhirst, C.B.E., A.F.C., E. S. Goodwin, C.B.E., A.F.C., H. K. Thorold, C.B.E., D.S.C., D.F.C., A.F.C. (all Acting Air Vice-Marshals).

RETIREMENTS

Air Marshal Sir E. Leslie Gossage, K.C.B., C.V.O., D.S.O., M.C., and re-employed in the rank of Air Vice-Marshall, with the acting rank of Air Marshal (unpaid), (1st February, 1944).

Air Commodore E. W. Norton, D.S.C. (24th February, 1944).

Group Captain C. L. King, M.C., D.F.C., A.F.C. (17th February, 1944).

Group Captain J. K. Summers, M.C. (1st March, 1943).

HONOURS AND AWARDS

Distinguished Service Order

The following awards of a Second Bar to the D.S.O. were announced on the dates shown :—

Wing Commander John Cunningham, D.S.O., D.F.C. (2nd March).

Wing Commander G. L. Cheshire, D.S.O., D.F.C. (17th April).

UNITED STATES DECORATION

At Washington on 29th March, General Arnold presented the United States Legion of Merit to Air Marshal Sir William Welsh, Head of the R.A.F. Delegation. The citation stated that the award was made in connection with the performance of outstanding services to the armed forces of the United States during the initial landings in North Africa, when Air Marshal Welsh held an R.A.F. command in that theatre.

RUSSIAN DECORATION

It was announced in Moscow on 20th February that the Order of Suvorov, 1st Class, had been awarded to Air Chief Marshal Sir Arthur Harris, Air Officer Commanding-in-Chief, Bomber Command.

NUMBERS OF AWARDS

In a written reply on 5th April to Wing Commander Hulbert, M.P., who asked if he could state the number of V.C.'s, D.S.O.'s and D.F.C.'s awarded to R.A.F. personnel during the present war, and how many of these awards had been won by officers of the Auxiliary Air Force, Sir Archibald Sinclair gave the following figures:—

	V.C.	D.S.O.	Bar to D.S.O.	D.F.C.	Bar to D.F.C.	Total
R.A.F. ...	13	426	37	4,925	413	5,814
A.A.F. ...	—	16	2	83	8	109
Totals ...	13	442	39	5,008	421	5,923

DESPATCHES EMBLEMS, WOUND STRIPES AND CHEVRONS

The Air Ministry announced on 19th February that despatches emblems, wound stripes, and chevrons for war service have now been introduced. Personnel of the following classes are eligible: (1) Officers and airmen of the British, Dominion, Indian and Colonial Air Forces. (2) Members of Princess Mary's R.A.F. Nursing Service and its Reserve. (3) W.A.A.F. Officers and airwomen. (4) V.A.D. members.

Despatches emblems are in bronze in the form of a single oak leaf, and distinct from the pattern authorised for mentions in despatches during the Great War. One type is designed to be sewn on blue-grey uniform and another to be affixed by safety pin to tropical uniform. Only one emblem is to be worn, irrespective of the numbers of awards received.

Wound stripes are of gold braid, five thirty-seconds of an inch wide and $1\frac{1}{2}$ inches long. Those denoting wounds sustained in previous wars are of red rayon of similar dimensions. One gold stripe is to be worn for each occasion on which certain wounds and injuries are sustained during the present war, but only one red stripe will be worn irrespective of the number of wounds sustained. The stripes will be worn vertically on the left forearm. They may be worn with plain clothes after discharge or transfer to the reserve.

Service chevrons are printed in red on a blue-grey background for wear with blue-grey uniform, and on a khaki background for wear with tropical uniform. One chevron will be worn for each completed year of service in the present war. Chevrons are to be worn on the right forearm, apex uppermost, and may, if desired, be worn with plain clothes after discharge or transfer to the reserve.

WOMEN'S AUXILIARY AIR FORCE

The Duchess of Gloucester, Air Chief Commandant, on 8th February inspected sections of the Women's Auxiliary Air Force at an R.A.F. Station in the Midlands.

To enable Air Commandant Lady Welsh, Director of the W.A.A.F., to make frequent visits to units where members of the Force are serving, it was decided in February to appoint a second Deputy Director. Group Officer C. Woodhead was appointed Deputy Director to advise on matters of organization. For the previous year she had been senior W.A.A.F. staff officer at Balloon Command. The other Deputy Director, who will advise on personal matters, is Group Officer P. C. Greig, who had been Chief Training Instructor at the W.A.A.F. Depot, and from May, 1943, had held a staff appointment at the Air Ministry.

The number of W.A.A.F. members doing photographic work is being greatly enlarged. A number of airwomen are taking a course at a School of Photography in Technical Command, after which they will be posted to stations to do the general work of a photographic section. The women have been drawn from among aircraft hands and others who can be freed from other W.A.A.F. trades.

THE AIR ESTIMATES

Sir Archibald Sinclair, Secretary of State for Air, introduced the Air Estimates in token form in the House of Commons on 29th February. The following were among the points made in his speech :—

Discussion of the estimates for the three Service Departments would proceed this year in the knowledge that we were in all probability approaching the climax of the War—a period which would demand from everyone the greatest concentration of effort. It was his principal task to account for the very large resources of man power which air operations had required during the last year.

Parliament had staked heavily on the R.A.F. during this war. In peace, before rearmament started, the vote for air supplies was about half the then Army vote and little more than a third of the Navy vote. To-day, the man power allotted to the Ministry of Aircraft Production was larger than the whole labour force of the Ministry of Supply, which, in its turn, was greater than the man power allotted for shipbuilding both for the Navy and Merchant Service.

Of the resources allotted to the air war, the largest share was given to Bomber Command. He wished to pay tribute to the work of the Polish, Czech, French, Belgian, Dutch, Norwegian and other Allied squadrons. Canada, Australia, New Zealand, South Africa and Southern Rhodesia—our partners in vast overseas training organizations—have squadrons fighting alongside our own, as do the squadrons of the Indian Air Force in the Far Eastern theatre. In addition, many fine Dominion crews and crews from the Colonial Empire are fighting in R.A.F. squadrons. They had won great renown. Our American Allies had also won resounding success in two hemispheres, and he paid tribute to the comradeship and intimate co-operation between their air forces and our own.

Speaking of the administrative machine by which our operations are sustained, it had not been pleasant for the people of this country to have their land turned into an air base, and to be dispossessed of their houses and crops. Cheerfully as these sacrifices had been borne, it had been a distasteful task to impose them, and he was glad to say that the Ministry had almost reached the end of their territorial demands.

The most gigantic civil engineering and building programme ever undertaken in this country was now nearing completion. It was right that he should mention those who had contributed to it—the staffs of the Air Ministry, under Air Chief Marshal Courtney and Mr. Holloway, Director-General of Works. Since war began, the Air Ministry works organization, working largely through building and civil engineering contractors, had erected a million buildings and laid down concrete tracks equivalent to a 30-foot road from here to Peking.

So many bases, for American Forces as well as our own, were able to be fitted into this small island because so much of our training had been carried on outside it, in the Dominions and the United States. The training problem would never have been solved without that help.

Heavy dilution of training staff was inevitably accompanied by an increase in the rate of accidents, but as the new training organization was consolidated the upward trend of the accident rate was reversed. The rate for the R.A.F. at home was 30 per cent. lower in 1943 than in 1942, and was now lower than at any time during the War. Wastage from sickness had also been reduced. There were, during the past twelve months, fewer sick than at any time since war began.

Remarkable strides had been made in the rehabilitation of men suffering from burns, severe wounds and accidents. Over 80 per cent. of the patients had been able to get back to full duties in a shorter time than a few years ago would have been believed possible.

The Transport Command, which had grown rapidly, was being expanded to meet future requirements of the R.A.F., at home, in the Mediterranean, and in South-Eastern Asia, while remaining responsible for the delivery of aircraft across the North and South Atlantic. Its aircraft were available at any time to be thrown into battle—carrying supplies to the front and moving wounded to the rear.

It shared the burden of air transport with the British Overseas Airways Corporation. Route mileage of the B.O.A.C. increased by over 20 per cent. in 1943, and was four times as great as the combined route mileage of Imperial Airways and British Airways in 1938. Their routes included the North Atlantic service, and services to Stockholm, to Lisbon, down the West Coast of Africa, to Cairo and on to Turkey in the North and India in the South, besides the important route from Durban up the East Coast of Africa to Cairo, and so on by Bagdad and Basra to Karachi.

Coastal Command had achieved close working partnership with the Royal Navy in the Battle of the Atlantic. This battle was not a series of single combats between a U-boat and an aircraft or warship, but prolonged engagements over thousands of miles of sea in which the work of the surface forces was at every stage integrated with that of aircraft.

The Germans had increased the numbers of anti-aircraft guns in U-boats to force up our coastal crews to heights at which the accuracy of their bombing would fall off. But the crews roundly declared that they would not be forced up. Admiral Doenitz was reported to have said that an aircraft could no more attack a submarine than a crow a mole. The mole was trying to turn himself into a porcupine, but still could not escape Coastal Command's talons.

Against surface shipping, the Command had had a year of extended activity and considerable success. Quite a proportion of Germany's coastal traffic had been sunk by Coastal Command Beaufighters and the sea mining aircraft of Bomber Command. Dangers of the sea passage to Norway had certainly diminished its usefulness. The port of Rotterdam was no longer in use.

In the Indian Ocean and Pacific, we had been building up our forces, and the Japanese had lost the air supremacy they enjoyed in 1942. A notable event was the arrival of Spitfires in this theatre. In Burma, Spitfires appeared where the Japanese had been expecting Hurricanes, and in their first two encounters destroyed 21 of the enemy for the loss of three of their own.

Turning to dispositions for the battle for liberating Europe, the Fighter Command and Army Co-operation Command had been combined with the American 9th Air Force into a new organization called the Allied Expeditionary Air Force, under the command of Air Chief Marshal Leigh-Mallory. This force had two main components. On the one hand, the 2nd British Tactical Air Force, under Air Marshal Coningham, and the

9th American Air Force, under General Brereton, would be available to support operations on the Continent; on the other hand, a force for which they had revived the old title of the Air Defence of Great Britain, under Air Marshal Hill, would be responsible for the day and night defence of these islands. Offensive and defensive functions had thus been separated and defined and at the same time unified at the highest level for the great and intricate battles ahead.

In the recent recurrence of the "blitz," the kind of attack met with was very difficult to counter. Probably the whole time spent by a German bomber over this country was less than twenty minutes; yet we had been able to inflict on these haphazard raiders a higher rate of casualties than all the massed fighter defences of Germany had inflicted on our far more numerous bombers penetrating deeply into enemy territory. We could not better protect our homes than by increasing the weight of our attack upon Germany.

As regards the bomber offensive, it may well be that future historians will look back upon the period between the February and March moons as one of the decisive stages of the whole War. We are steadily pushing the door open, inch by inch, until we can pass through. Our offensive is producing results which are visible, measurable and progressive.

From our bombing operations from this country in the last year over 2,500 aircraft did not return. Taking an average of seven men per aircraft, this meant that nearly 18,000 men were killed or prisoners. But compare this with the bloody fighting of the Eastern Front, or with the carnage of the last war. In one day, on 1st July, 1916, we lost on the Somme 21,997 men killed and missing to secure an advance $3\frac{1}{2}$ miles wide and one mile in depth.

The ratio of casualties to the weight of bombs dropped was steadily falling, in spite of the fact that the range of our attacks had been steadily increasing. Berlin received in January of this year in a single month as great a weight of bombs as had fallen on London from the beginning of the War.

The rising numerical strength of Bomber Command was not in itself sufficient to account for these extraordinary achievements. We had developed navigational aids and safety devices. Co-operation between British and American scientists was 100 per cent. complete. The introduction of the Pathfinder Squadrons and the brilliant conduct of their operations by Air Vice-Marshal Bennett had enormously increased the effectiveness of the offensive.

It was also attributable to the admirable conduct of our operations by Air Chief Marshal Harris and his staff and commanders, working under the wise and steadfast direction of the Chief of the Air Staff, Sir Charles Portal, and above all to the excellence of the products of our factories and the skill and bravery of our crews.

DOMINIONS AND COLONIES

AUSTRALIA

The Duke of Gloucester, Governor-General Designate, will take with him to Australia a gold cup of greetings from the R.A.F. to the Royal Australian Air Force, presented by Mr. E. J. R. Mack, of Guildford, an airman in the last war, and who has been closely associated with the development of the A.T.C. The cup was handed to the Duke on 30th March at a birthday celebration of the Boomerang Club by Air Marshal Sir Bertine Sutton, representing the R.A.F.

In a message dated 17th February, the Canberra Correspondent of *The Times* stated that the first of a number of Sunderland flying boats which were being flown to Australia by Australian pilots for use by the R.A.A.F. were expected to arrive in the Pacific soon. It was understood that they would be primarily engaged in operations against submarines. A number of American four-engined Martin Mariner flying boats had been added to the strength of the R.A.A.F.

CANADA

Captain Harold Balfour, Under-Secretary of State for Air, arrived in Ottawa on 7th February to discuss matters affecting the Commonwealth Air Training Plan with Mr. C. G. Power, Minister of National Defence for Air, and with the Canadian Chief of Air Staff. Consultations also took place in London on modifications of the plan to meet the changing conditions of the War.

Announcing the result of the discussions on 16th February, Mr. Power stated in the Canadian House of Commons that the Commonwealth Plan had reached its original objective of creating air forces equal in size and superior in quality to those of the enemy, and we now had increasing air superiority over the enemy in every theatre of war. This achievement necessitated changes in the plan. Because of the reduction in the intake of trainees a certain number of training units and schools in Canada would be closed, beginning with the R.A.F. transferred schools. The men would be transferred to the operational theatre in England to increase the number of skilled men available for the continued expansion of the R.A.F. front line. Existing agreements between the two countries on the service conditions of Canadians in the R.A.F. were to be improved, and Canadians who had enlisted in the R.A.F. would be allowed to transfer to the R.C.A.F. if they wished.

In a statement at Ottawa on 17th April, Air Marshal Breadner, Air Officer Commanding-in-Chief, R.C.A.F. Overseas, who was on an official visit from Britain, said that more than forty R.C.A.F. squadrons were now operating in Europe. They dropped over 8,000 tons of bombs on enemy targets during the first three months of this year, which meant that their attacking power had almost doubled, as last year's total was 18,000 tons. Enlistment of men for R.C.A.F. air crews is being resumed in Canada, although the numbers taken will be limited to meet the reduced requirements of the Commonwealth Air Training Plan. While the original intention was to close the Commonwealth project next March, recent discussions have led to the decision to continue it.

NEW ZEALAND

Among a number of awards approved by the King and announced on 8th March in recognition of conspicuous service in operations against the Japanese was that of C.B.E. to Air Commodore S. Wallingford, R.N.Z.A.F.

INDIA

The award of the D.S.O. to Squadron Leader Mehar Singh, No. 6 Squadron, Indian Air Force, announced on 27th March, was the first to be made to an officer of that Force. Squadron Leader Singh commands an I.A.F. Squadron which is employed on tactical reconnaissance on the Arakan front, and in just under three months he had completed 82 sorties.

REVIEWS OF BOOKS

GENERAL

China and Japan. By Sir John Pratt, K.B.E., C.M.G. Historical Association Pamphlet No. 129. (P. S. King and Staples Ltd.) 1s. 1d.

Here is another of the excellent pamphlets issued by the Historical Association. Many of us are distinctly hazy about what has really been happening in China and Japan since the beginning of this century. This little book should help to dispel our ignorance. In thirty pages we are given a historical study of events in the Far East that is clear, illuminating and most readable.

MILITARY

Official History of Operations on the North-West Frontier of India, 1936-37. (Government of India Press, New Delhi.) 15s. 6d.

This full and detailed account of the operations in Waziristan in 1936-37 will be valuable to students of warfare on the Indian North-West Frontier. The narrative is lucid and there are numerous maps and sketches. It is a pity that there is not a proper index. The book is obviously not intended for popular consumption; it is a plain unvarnished chronicle of events.

Madras Infantry, 1748-1943. By Lieut-Colonel E. G. Phythian-Adams. (Government Press, Madras.)

This short summary of the history of Madras infantry is intended primarily for the benefit of officers and men of the 3rd Madras Regiment. This regiment was formed in 1922 of the few old Madras battalions still in existence; in the next few years its constituent units gradually disappeared, and its only remaining battalion was disbanded in 1928. The regiment was reconstituted as recently as 1942 and by now comprises many battalions.

In a Foreword to this book the Governor of Madras, Sir Arthur Hope, writing in October, 1943, mentions: "In the present war large forces of Madras infantry have been raised. Indeed at the present time the Madras Presidency holds the proud distinction of contributing more recruits to the armed forces than any other Province or State in India."

The author recounts the good service and gallant deeds of Madras troops in bygone times and he is confident that the Madrassis of to-day are as good military material as any other Indians, provided they are led by good officers; it is the quality of the officer that mainly counts. With this opinion many will agree.

The Australian Army Medical Services in the War of 1914-18. Volume III. By Colonel A. G. Butler, D.S.O., V.D., B.A., M.B., Ch.B.(Camb.) (Australian War Memorial, Canberra).

This volume completes the Official History of the Australian Army Medical Services in the last world war. It is a tome of 1,100 pages, very full, thorough and comprehensive with numerous illustrations and statistics, and an exhaustive index. The book is compiled with care, is well written and well produced. Apart from its technical medical interest, it will be of great value as a work of reference.

AIR

Air Power and the Expanding Community. By Major Oliver Stewart, M.C., A.F.C. (George Newnes, Ltd.) 15s.

Perhaps the author of this dissertation on Air Power thought to disarm criticism when he wrote in his Preface, "My conclusions are negative. In fact this book is largely a

piece of destructive criticism." But even destructive criticism, if it is to serve any useful purpose, should be accurate; this unfortunately Major Stewart has not been in a number of important particulars, which must detract largely from the value of his arguments.

It would be somewhat outside the scope of this Journal to deal with his strange theory that the War is due to the subconscious feeling among the rank and file of all nations that air transport has provided an opportunity to all communities to expand. Suffice to say that this seems to be putting the cart before the horse. As populations increase and a higher standard of living is demanded for the majority, so there is the urge to go further afield to find means of meeting requirements, whether living space or food or more complex needs. It is these demands which produce new and improved means of transport. It would seem abundantly clear by now that the War was caused by one nation—the Germans, wholeheartedly supporting leaders whose avowed object, they have now shown, has all along been to dominate and enslave the rest of the World. The Japanese and Italians thought to seize the opportunity for their own advantage.

When he comes to dealing with the conduct of the War, the author's thesis is that where we have failed it has been due to lack of appreciation of the influence of aviation; for this he blames the pre-War Service authorities—especially the Air Staff and senior R.A.F. officers. In support of this assertion he accuses them of holding views which he can have no authority for attributing to them. He maintains that our misadventures in the early part of the War were due to inadequate preparations for the co-ordinated use of all three Services, especially as regards the Air Force, and represents that our success after Alamein in October, 1942, was due to a belated appreciation of the need for it. He does not seem to realize that before an air force can give adequate support to the other Services it must have gained air superiority. He ignores the fact that, due to the apathy into which the country was allowed to sink by successive Governments, our air resources at the outbreak of hostilities were wholly inadequate to secure that first essential, while the French air force proved to be as broken a reed as their army. It was this lack of means and not failure within the Services to appreciate the need for it which resulted in our Army being without proper air support for the first two years of the War.

So far as this book can claim to be constructive, it seems limited to the revival of the old loose idea of a single fighting Service under one Minister. But the author admits that it would have to be composed of Sea, Land and Air Branches, the personnel of which would have to specialize in them. It is difficult to see, therefore, how this could be anything better than "same thing—different names," while the fact that there would be only one instead of three Ministers to fight the political battles for Service needs in peacetime might well result in our being no better prepared for war in the future than we were in 1914 or 1939.

Major Stewart writes with the fluent pen of an able journalist and he covers a wide range of subjects associated with aviation and air power; but he is unconvincing because he does not bring them into their correct perspective.

Aeroplane Production Year Book and Manual. Edited by Group Captain G. W. Williamson, O.B.E., M.C. (Paul Elek, Ltd.) 40s.

As stated in the Preface, "the purpose of this volume is to provide information in regard to production methods in a compact and accessible form." The book achieves its purpose; its 500 closely printed pages contain a mass of information. There are four parts: Part I comprises a series of articles on the fundamentals of aircraft production; Part II gives a summary of methods applicable to particular materials, and deals also with recent machine tool and small tool developments especially applied to aircraft production; Part III deals with the manufacture of particular aircraft; Part IV provides a list of technical articles under headings representing the various divisions of the book.

ADDITIONS TO THE LIBRARY

GENERAL

- ONE MAN ALONE. THE HISTORY OF MUSSOLINI AND THE AXIS. By M. H. H. Macartney. 8vo. (Chatto & Windus.) 15s.
- INDIA TO-DAY AND TO-MORROW. By G. de Montmorency. Pamphlet. (The Sign Post Press.) 6d.
- OCCUPIED EUROPE. (The Institute of International Affairs.) (Oxford University Press.) 1s. 6d.
- BRITISH ECONOMIC INTEREST IN THE FAR EAST. By E. M. Gullo. 8vo. (Oxford University Press.) 16s.
- THE FIFTEENTH QUARTER, APRIL 1ST TO JUNE 30TH, 1943. A Record of the War. By P. P. Graves. 8vo. (Hutchinson & Co.) 9s. 6d.
- HITLER'S GENERALS. By W. E. Hart. 8vo. (The Cresset Press.) 8s. 6d.
- WAR AND PEACE IN THE PACIFIC. (The International Secretariat.) 8vo. (Institute of Pacific Relations.) 6s.
- LEND-LEASE. WEAPON FOR VICTORY. By E. R. Stettinius. 8vo. (The Macmillan Company.) 18s.
- ADVANCE AUSTRALIA—WHERE? By B. Penton. 8vo. (Cassell & Co., Ltd.) 8s. 6d.
- THE EIGHTH ARMY, SEPTEMBER, 1941, TO JANUARY, 1943. Prepared for the War Office by the Ministry of Information. Cr. 8vo. (H.M.S.O.) 1s.

NAVAL

- THE ROYAL MARINES, 1939-43. (The Admiralty.) 8vo. (H.M.S.O.) 9d.
- FIND, FIX AND STRIKE. THE STORY OF THE FLEET AIR ARM. 8vo. (Eyre & Spottiswoode.) 9s.

MILITARY

- OFFICIAL HISTORY OF OPERATIONS ON THE N.W. FRONTIER OF INDIA, 1936-37. 8vo. Issued by General Staff, India. (Manager of Publications, Delhi.) 15s. 6d.
- THE PRINCIPLES OF WAR. By Sun-Jzu. Translated by E. Machen-Cox. Presented by the Translator.
- ORDER BOOK OF THE MOUNTED STAFF CORPS, 1854-55. Manuscript. Presented by Major H. M. E. Orr.

AIR

- AEROPLANE PRODUCTION YEAR BOOK AND MANUAL. Edited by G. W. Williamson. 8vo. (Paul Elek.) Presented.
- AIR POWER AND THE EXPANDING COMMUNITY. By Major Oliver Stewart, M.C., A.F.C. (George Newnes, Ltd.) 15s. Presented.

ONE HUNDRED-AND-THIRTEENTH ANNIVERSARY MEETING

ON TUESDAY, 7TH MARCH, 1944, AT 3 P.M.

ADMIRAL OF THE FLEET LORD CHATFIELD, P.C., G.C.B., O.M.,

K.C.M.G., C.V.O.

(Chairman of the Council), presiding.

THE SECRETARY read the notice convening the meeting.

ANNUAL REPORT FOR 1943

The Council have the honour to present their Annual Report for 1943.

THE ROYAL CHARTER

With the sanction of His Majesty The King, the Privy Council was asked to give a ruling that the Royal Charter of the Institution can be interpreted as including the Promotion and Advancement of the Science and Literature of the Royal Air Force.

In reply the following letter was received :—

4th June, 1943.

" SIR,

" I am directed to refer to the question recently raised by the Council of the Royal United Service Institution as to the propriety of interpreting the objects of the Institution as set out in the Charter in such a manner as to enable the term ' naval and military ' which appears therein to be regarded as embracing matters relating to the Royal Air Force.

" I am to say that while the construction of a Charter is a matter that can be authoritatively determined only by the Courts, the Lords of the Council are of opinion that in the absence of any provision to the contrary in the Charter, it may be regarded as extending to the Armed Forces of the Crown generally, including those branches which are concerned with aviation in its military aspects. Their Lordships, in so far as they might be concerned, would therefore see no reason to question the interpretation of the term should the Council of the Institution decide to adopt it. At the same time, the Lords of the Council assume that if any endowments are held for specific purposes connected with the Institution, careful regard would be had to the necessity of ensuring that such a decision did not result in the administration of those endowments in a manner not sanctioned by the trust instruments.

" I am, Sir,

" Your obedient servant,

(Signed) E. LEADBITTER."

The Council have therefore decided that henceforth the publication of the objects of the Institution, more particularly in the Journal, should be worded : " For the Promotion and Advancement of the Science and Literature of the three Services."

COUNCIL

ELECTED MEMBERS

It was with great regret that the Council had to record the death of Colonel J. Josselyn, C.M.G., D.S.O., O.B.E., T.D., who had represented the Territorial Army on the Council and been a valued Member of the Finance Committee since March, 1930.

Brigadier J. A. Longmore, M.B.E., T.D., D.L., was elected to fill this vacancy.

The following Members, having completed three years service, retire :—

ROYAL NAVY

*Vice-Admiral Sir Geoffrey Blake, K.C.B., D.S.O.

*Admiral of the Fleet Lord Chatfield, P.C., G.C.B., O.M., K.C.M.G., C.V.O.

ROYAL NAVAL RESERVE

Commodore H. Stockwell, C.B., D.S.O., R.D.

ROYAL NAVAL VOLUNTEER RESERVE

Commodore the Earl Howe, C.B.E., V.D.

REGULAR ARMY

General Sir Robert Whigham, G.C.B., K.C.M.G., D.S.O.

TERRITORIAL ARMY

*Colonel F. D. Samuel, C.B.E., D.S.O., T.D.

*Colonel B. Abel Smith, D.S.O., M.C., T.D., A.D.C.

Of the foregoing those marked * offer themselves for re-election, for which they are eligible.

REPRESENTATIVE MEMBERS

Major-General J. S. Steele, C.B., D.S.O., M.C., succeeded Major-General A. Galloway, C.B.E., D.S.O., M.C., as War Office Representative.

Air Commodore P. E. Maitland, M.V.O., A.F.C., succeeded Air Vice-Marshall E. S. Goodwin, C.B.E., A.F.C., as Air Ministry Representative.

MEMBERSHIP

The total number of Members on the roll at the end of 1943 was 5,322 as compared with 5,385 in 1942. During the past year 169 Members joined the Institution, as compared with 127 in 1942. There were 65 withdrawals as compared with 96 in 1942; 31 Life Members and 105 Annual Members died; 31 Members were struck off for being two years in arrear with their subscription.

The details of Members joining are as follows :—

Regular Army	...	...	...	...	...	60
Home Guard	...	...	...	...	...	32
Army Cadet Force	...	...	...	...	...	17
Royal Air Force	...	...	...	...	...	14
Royal Marines	...	...	...	...	...	8
Air Training Corps	...	...	...	...	...	8
Royal Navy	...	...	...	...	...	7
Indian Army	...	...	...	...	...	7
Territorial Army	...	...	...	...	...	5
Dominion Forces	...	...	...	...	...	5
Sea Cadet Corps	...	...	...	...	...	3
Royal Naval Volunteer Reserve	...	...	...	...	...	2
Women's Auxiliary Air Force	...	...	...	...	...	1
						<hr/> 169

This gives a net decrease of 63 as compared with 165 in 1942. As the loss of some of the Life Members does not affect the financial aspect, the financial loss on the year is 33.

FINANCE

The surplus of income over expenditure for 1943 amounts to £552 17s. 2d. as compared with a surplus of £470 7s. 8d. in 1942.

RECEIPTS.—The following is a comparison of Receipts under the principal headings :—

	1943			1942		
	£	s.	d.	£	s.	d.
Annual Subscriptions	5,105	16	0	5,157	1	0
Life Subscriptions	182	15	0	206	8	0
Special Exhibition	662	7	3	493	5	3
Journal Sales	1,076	5	4	1,053	19	2
Journal Advertisements	395	8	0	524	11	1

There is again a very satisfactory increase in the Special Exhibition takings during 1943.

In spite of the fact that the Paper Controller reduced the number of advertisement pages in the Journal by 50 per cent., thanks to the efforts of our Advertising Manager the revenue from that source has only fallen by 25 per cent.

EXPENDITURE.—It was decided to increase the Fire Insurance covering the Institution Building to £80,000, and this is reflected in the additional charge under that heading.

INVESTMENTS.—The Institution's holding of £1,479 18s. 11d. in 2½ per cent. Conversion Loan, 1944-49, which cost £1,430 2s. 11d., has been sold for £1,505 12s. 11d., and £1,500 of this sum re-invested in 3 per cent. Savings Bonds, 1960-70. In addition, £1,000 out of income was invested during the year in the same security.

JOURNAL

The Journal has been published regularly in its necessarily reduced form, and endeavour has been made to keep the contents as representative in interest as possible. The Journal Committee will, however, be glad to receive more articles relating to the present war. The Editor is authorized to submit those which seem suitable for publication to the Service Departments for the necessary approval.

The Institution is indebted to the various lecturers and to contributors of articles and reviews who have done so much to maintain the educational value and literary standard of the Journal in the present difficult circumstances.

LIBRARY

The Library is still established at "Glynllivon," Carnarvon, North Wales, but continues to provide facilities to Members, and requests for books are dealt with promptly.

Ninety-four volumes were added to the Library during the year. Despite its evacuation to the country, good use of it is still made by Members and some 3,500 books were issued on loan during 1943.

The Reading Room in the Institution provides the leading papers and periodicals for the use of Members and certain books of reference are also retained in London.

MUSEUM

The Special Exhibition in the Theatre illustrating "The Services in the Present War" has proved increasingly popular, both with the public and the Services. The total number of visitors during the year was 44,573, including 12,773 members of the Allied Forces admitted free of charge, as compared with 26,160 in 1943 and 20,744 in 1941.

In July a number of valuable and interesting Air exhibits, war relics, and enlarged photographs were lent by the Air Ministry; the former included a German rubber dinghy recovered from the Mediterranean, complete with its kit; also several types of bombs being used by the Royal Air Force.

A number of pictures from the Crookshank Collection depicting historic battlefields fought over again during the present war have been added to the Exhibition.

New relics received for the Museum during the year include a coat worn by Lieutenant R. B. Caton, XIIth Light Dragoons, who was present at the battle of Alexandria; two paintings of the Devon Mounted Rifles; full dress uniforms of the Royal Horse Artillery, Royal Dragoons, the Cameronians, the Black Watch, and the Wiltshire Regiment; and several other interesting Naval and Military items.

BEQUESTS

The Ashanti War Drum, taken at Coomassie by the expedition under Colonel Sir Francis Scott, which had been on loan for many years, was bequeathed to the Museum by the late Lord Baden Powell, together with a hammered gold leaf bowl.

THE CHAIRMAN'S ADDRESS

You have before you the Annual Report for 1943, and it really does not call for much elaboration, but there is one important matter on which I should like to comment.

The Council have for many years regarded the Royal Air Force as an equal partner with the two older Services in the promotion of the objects for which the Institution exists. It seemed to us, however, that this should be firmly established, not only officially, but also legally.

With the permission of His Majesty The King, as our Patron, we therefore consulted the Privy Council as to whether the wording of the Royal Charter could be altered so as to make specific mention of Air Science and Literature. We found, however, that that would not only involve considerable expense, but would mean changing and possibly replacing the historic document which is the foundation of the Institution's existence. The letter from the Privy Council, which is reproduced in this Annual Report, clarifies the position, and in effect provides the essential legal authority for that interpretation of the Royal Charter which our Council sought to establish. Consequently, the objects of the Institution are now published as "The Promotion and Advancement of the Science and Literature of the Three Services."

It is satisfactory to note that there has been an increase in the number of Members who have joined during 1943 as compared with the year before, but, even so, they have not made up for our losses during the year. Now that we have widened the scope of our membership so as to admit officers of the Home Guard and Cadet Corps, and ladies serving, or who have served as officers in one of the three Services, we should be getting a steady flow of members from those new sources. I hope, therefore, that Members will do everything possible to make the value of the Institution, and especially its JOURNAL and Lending Library, as widely known as they can.

We have had a very successful lecture session and the attendance has been much better than during the earlier years of the War—a tribute to the Lecturers and their Chairmen, and to the interest aroused by the subjects dealt with. All these lectures, I may remind you, reach a wide circle of the Services all over the world through the medium of the JOURNAL.

"SALUTE THE SOLDIER" EXHIBITION

Although it does not fall within the period covered by the Annual Report, I think it will be appropriate if I mention the special Exhibition which is now being prepared in the Banqueting Hall and Theatre in connection with the "Salute the Soldier" War Savings Week in London at the end of this month. At Lord Kindersley's request the Council have agreed to re-open part of the Museum and to utilize some of our military exhibits for this purpose. General Sir Walter Kirke, our next Chairman, has been good enough to preside over a committee on which the National Savings Committee, the War Office, and the Ministry of Works are represented, and which is responsible for the arrangement of the Exhibition.

RE-OPENING OF THE MUSEUM

It is our intention that, at the end of the War Savings Week—during which admittance will be free—this part of the Museum shall remain open to the public, the usual charges and hours of opening which maintained in peace-time being resumed. Members of the Allied Forces will be admitted free to the Museum, as they have been throughout the War to that little exhibition in the theatre which has proved so popular.

THE ANNUAL REPORT

The first section of the Report deals with Finance, and Colonel Abel Smith, as Chairman of the Finance Committee, will answer any questions on that subject. *(No questions were asked.)*

The next Section deals with the JOURNAL and Library, and Admiral Tupper, as Chairman of that Committee, will deal with any questions. (*No questions were asked.*)

Admiral Goodenough, as Chairman of the Museum Committee, will deal with the last Section. (*No questions were asked.*)

ADMIRAL SIR WILLIAM GOODENOUGH: It may reassure Members to know that although we have brought back a few of our treasures the most valuable are still in safe keeping.

THE CHAIRMAN: If there are no questions I, as Chairman, will now move:

"That the Report and Accounts, as circulated, be taken as read and adopted."

COLONEL ABEL SMITH: In seconding this resolution I should like to remind you of the death during the year of Colonel Josselyn. He was not only a member of the Council, but also served on the Finance Committee and was a most regular attendant at our meetings. He is a great loss to us. He was most helpful and gave us legal advice on many difficult matters. He attended our meetings right to the end and it was quite clear that his death was due to overwork.

There is very little for me to say with regard to the Accounts. We have made a slightly bigger profit than last year which is mainly due to the Special Exhibition in the theatre, which has brought in more revenue. I should like to remark that the surplus which we are gradually collecting will be needed at the end of the War when there will be many expenses to face in connection with redecoration and moving the library back.

I beg to second the resolution.

The resolution was put to the Meeting and carried unanimously.

RE-ELECTION OF AUDITORS

LIEUT.-COLONEL R. M. HALL: I beg to propose:—

"That Messrs. Barton, Mayhew & Company be re-elected Auditors for the ensuing year at a fee of fifty guineas."

COMMANDER W. B. ROWBOTHAM, R.N.: I beg to second the resolution.

The resolution was put to the Meeting and carried unanimously.

VACANCIES ON THE COUNCIL

THE CHAIRMAN: Our next business is to deal with the vacancies on the Council. The undermentioned Officers, as you will see on the Agenda, have been nominated as candidates for the vacancies on the Council:—

ROYAL NAVY (2 vacancies)

Vice-Admiral Sir Geoffrey Blake, K.C.B., D.S.O.

Admiral of the Fleet Lord Chatfield, P.C., G.C.B., O.M., K.C.M.G., C.V.O.

ROYAL NAVAL RESERVE (1 vacancy)

Commodore R. Harrison, D.S.O., R.D., R.N.R.

ROYAL NAVAL VOLUNTEER RESERVE (1 vacancy)

Commodore J. M. Dick, V.D., R.N.V.R.

REGULAR ARMY (1 vacancy)

General Sir Charles Bonham-Carter, G.C.B., C.M.G., D.S.O.

TERRITORIAL ARMY (2 vacancies)

Colonel F. D. Samuel, C.B.E., D.S.O., T.D.

Colonel B. Abel Smith, D.S.O., M.C., T.D., A.D.C.

ROYAL AIR FORCE (1 vacancy)

Air Chief Marshal Sir Robert Brooke-Popham, G.C.V.O., K.C.B., C.M.G., D.S.O., A.F.C.

The Royal Air Force vacancy is brought about by the change of Bye-Law voted for at the last Anniversary Meeting which reduced the number of Military Members from twelve to ten, and increased the Royal Air Force Members from two to four. One of the additional R.A.F. Representatives has already been elected and the election of a second one to-day will give full effect to the amended Bye-Law. I will now ask the meeting to approve the nominations for the vacancies on the Council.

The nominations were approved.

TRENCH GASCOIGNE AWARDS

THE SECRETARY: The subject of the Essay was: "Is compulsory training in National Defence desirable for the youth of this country after the War? If so in what form should it be given; can use be made of any existing youth organizations; how is it to be associated with education, and between what ages should it take place?"

The Referees duly reported that, in their view, two Essays tied for first place; and the Council have agreed to award two Prizes of Thirty Guineas. One has been won by Lieut.-Commander G. M. Bennett, R.N., who is serving overseas, but Mrs. Bennett—his wife, is here to receive the Prize on his behalf.

THE CHAIRMAN presented the prize to Mrs. Bennett. He said: Your husband has on two previous occasions won this Prize, the first occasion was in 1934 when he was awarded the Gold Medal, and the second in 1942 when he received the Prize. I do hope you will tell him how greatly we admire his work.

MRS. BENNETT: Thank you very much, he will be delighted.

THE SECRETARY: The other First Prize has been won by Major-General H. Rowan-Robinson, C.B., C.M.G., D.S.O., who has been unable to get here to-day and it will be sent to him.

VOTE OF THANKS TO THE CHAIRMAN

GENERAL SIR WALTER KIRKE: I beg to propose:—

"That the thanks of the Institution be accorded to the Chairman."

Lord Chatfield has done wonderful work for us during the last year; it would be impertinence on my part to pay any tribute to him because his name is a household word, but I should like to assure him how greatly we appreciate his firm hand on the tiller, his wise advice, and his unfailing courtesy.

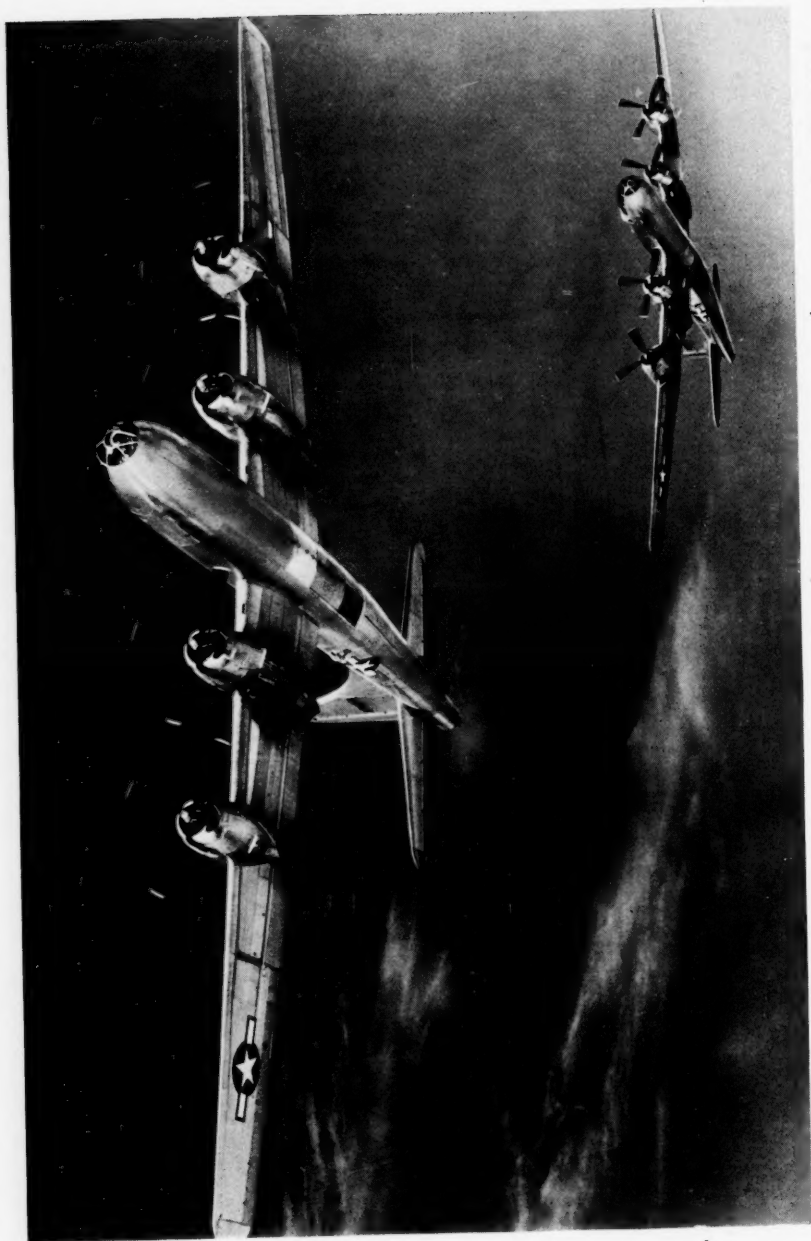
MARSHAL OF THE ROYAL AIR FORCE SIR EDWARD ELLINGTON: I should like to second that resolution and to associate myself with what Sir Walter Kirke has said. We are greatly indebted to Lord Chatfield for having presided at our Council meetings and at this Anniversary Meeting.

The motion was carried with acclamation.

ADMIRAL OF THE FLEET LORD CHATFIELD: I am very grateful to you for your kind remarks. It has been a great pleasure and honour to me to have been Chairman during the past year and I am sure that we "old boys" as we fade away into the background of the stage in the Services do get a certain amount of comfort in being able to cling to such ledges as there are and to feel that we are giving a general push to the boat. It gives us a wonderful opportunity to meet on the Council, in particular, the brilliant officers of the Services who are still pulling the boat. I have very much enjoyed my time, we have had some interesting lectures and discussions, and I am particularly happy that I was in the chair when we made that very important change which gave the Royal Air Force a much more appropriate position.

In my successor, General Sir Walter Kirke, you will be fortunate enough to have the sort of person who should be in charge. He has all the qualities which a Chairman should have.

The Meeting then terminated.



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